

CATE SCHOOL
ACADEMIC COURSE
REGISTRATION BOOKLET

For the School Year 2024-2025



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CURRICULAR AND PEDAGOGICAL FRAMEWORKS

The overarching objective of Cate School's academic program is to promote the greatest growth possible for each student and teacher, regardless of race, ethnicity, and nationality, religious and political beliefs, socio-economic background, gender and sexual identity, learning profiles, and life experiences.

Educational Principles

Each Cate student and teacher will develop:

Curiosity – a desire to discover the unknown and acquire the ability, imagination, and initiative to ask and pursue questions of real value

Determination – the ability to identify worthy risks; the methods and skills of the academic disciplines and one's own best learning practices; the grit, patience, and self-discipline to persist at hard work; the resilience to deal with both failure and success

Communication – the skills to collaborate productively with others, to present information clearly, and to be effective presenters, listeners, and respondents employing verbal, quantitative, and visual languages skillfully, using a range of media

Knowledge – essential knowledge, core competencies, and standards of honorable scholarship

Compassion – recognition of the needs and interests of others; empathy and respect; the skills of collaboration, leadership, membership, and service

Grade-Level Themes

9th grade is the year of **Orientation and Organization**

10th grade is the year of **Awareness and Responsibility**

11th grade is the year of **Connections and Purpose**

12th grade is the year of **Mastery, Self-Determination, and Leadership**

A Culture of Inquiry

While inquiry in teaching harkens back as far as Socrates and the influence of John Dewey, Cate's approach is distinctive in its coordination, coherence, and consistency across all academic disciplines. Our triad of (1) Inquiry for students (learning specific questioning skills), (2) Inquiry by teachers (in their instructional methods and teaching with essential questions) and (3) Inquiry in the community (through our yearly school-wide theme, summer common read, weekly convocation series, and the spring "Senior Inquiry Day,") all combine to create a unique "Culture of Inquiry" at Cate.

DEI Graduate Profile

By the time students graduate, they will have had opportunities to

- explore their individual identities while simultaneously building relationships, trust, and a deep appreciation for the diverse backgrounds and experiences of their peers.
- interact in a learning and living environment that prioritizes varying ideas, perspectives, and insights
- to reason more critically as well as empathetically so that they can understand the world in a fuller sense
- take on the responsibility of deeper and continued learning for themselves and actively model the values and behaviors that we are working to instill in our younger students

Curriculum Standards

Cate's curriculum will consist of courses of study that:

- embody our educational principles, develop inquiry practices of the different disciplines, and provide opportunities articulated in the DEI graduate profile
- are coordinated across disciplines and over four successive years
- are developmentally appropriate and guided by our grade-level themes
- employ effective and inclusive teaching practices

KINDS OF COURSES

1. A **YEAR COURSE** runs for the entire year. Students who enroll in a year course in the fall are required to remain enrolled for the entire year.
2. A **TRIMESTER COURSE** runs for one trimester and may be offered in the fall, winter, or spring.
3. A **FULL CREDIT COURSE** meets for at least three 65-minute periods per week
4. A **HALF-CREDIT COURSE** meets in two 65-minute or two 50-minute periods per week.

Kind of Course	(For registration process) Course Units / Trimester	Credit Equivalent* (For noting on transcripts)
Yearlong, Full Credit	1	3.0
Trimester, Full Credit	1	1.0
Yearlong, Half-Credit	0.5	1.5

*Not pertinent for course registration.

General Policies

1. Students will take five full-credit courses each trimester and may take up to three half-credit courses in addition to the five course requirement. When selecting courses, students/advisors should ensure that per trimester course load is at least 5 *course units* and no more than 6.5 *course units*.
2. Special circumstances may lead to exceptions being made to the above requirements, but these exceptions need the approval of the Dean of Academics and the student's advisor.
3. Each course in the curriculum follows a prescribed course of study – texts, materials, methods, and objectives – approved by the department chair and the Dean of Academics as being appropriate to the stated goals of the course. Students in a given course are not exempted from any element of its course of study.
4. Directed Studies may not be used to reach the five full-credit courses per trimester requirement.
5. The terms “lower” and “upper” school are used to designate course loads. “Lower school” refers to 9th and 10th grades, and “upper school” refers to 11th and 12th grades.
6. Letter grades and comments are used to communicate student achievement and areas of strength and growth at the end of each trimester. For full year courses, the grade reported

each trimester is a “running grade”, the grade the student has in the course by that point in time. Grades in trimester courses will all appear on the official school transcript. Final grades for year long courses are communicated in the final grade report in June and appear on the official school transcript.

7. A student’s grade point average (GPA) is based on a four-point scale. Cumulative GPA’s are calculated at the end of the sophomore, junior and senior years. Grades from the 9th grade year are excluded from the GPA calculation, as are any grades/GPAs earned from other schools.
8. Honors courses receive an additional 0.5 weight in the GPA calculation and Advanced courses receive an additional 1.0 weight in the GPA calculation.
9. A note about the College Board’s Advanced Placement Program: In 2012, Cate replaced our AP courses with a distinctive Cate Advanced Curriculum. We currently offer approximately 55 advanced and honors courses, which lead to independent inquiry and analysis not possible in a standard AP class. We do not administer AP exams for our students.

GRADUATION REQUIREMENTS

ARTS

Foundation Arts in the 9th grade. At least one half-credit yearlong course in visual and/or performing arts in the 10th grade. At least one half-credit full-year course in the 11th or 12th grade.

ENGLISH

A yearlong course per year through the 11th grade, and a trimester course in the fall, winter, and spring of the 12th grade year.

HISTORY

Three years of history, including 9th-grade Humanities, 10th-grade World History, and 11th-grade US History.

HUMAN DEVELOPMENT

Courses are centered around grade level themes: 9th Grade Seminar's focus is Orientation and Organization. 10th Grade Seminar is centered around Awareness and Responsibility. The Junior year, 11th Grade, is designed to promote Connection and Purpose with an emphasis on student leadership.

MATHEMATICS

One yearlong course per year through the 11th grade, through at least Algebra 2 or Math 3H.

MODERN LANGUAGES

Three sequential years of the same language, through at least level 3.

SCIENCE

Three years of laboratory science are required: Physics for 9th graders, Chemistry for 10th graders and Biology for 11th graders, or as a 12th grader with approval.

TYPICAL COURSES OF STUDY

GRADE 9

9th graders take the following required courses:

Humanities (English/History)	Physics
Mathematics	Foundation Arts
Modern Languages	9th Grade Seminar

GRADE 10

With few exceptions, 10th graders take the following courses:

English 10	Arts
Mathematics	Chemistry
Modern Languages	10th Grade Seminar
World History	

GRADE 11

Rising 11th graders should plan for both the 11th and 12th grade years. When choosing courses students should consider graduation requirements, appropriate workload, college plans and individual strengths and interests in planning for the two-year sequence. Advisors, department chairs, college counselors, and the Dean of Academics should serve as resources for rising 11th graders choosing their courses of study.

With few exceptions, juniors take the following courses:

1. English 11 or Advanced English 11
2. Mathematics (at or beyond Algebra 2 or Honors Math 3)
3. U.S. History or Advanced U.S. History
4. Biology or Honors Biology
5. Modern Language (at or beyond level 3)
6. Art (unless deferring requirement to 12th grade)
7. 11th Grade Seminar

GRADE 12

Seniors must take at least one English course each trimester. If they have not already done so, they must complete whatever requirements remain and take five full credit classes each term. Seniors may choose to pursue an independent Senior Inquiry Project and/or Directed Study.

ADVANCED COURSES

Cate's Advanced courses are designed to challenge our most accomplished and aspirational upper school students by giving them an opportunity for focused, in-depth study in a particular discipline or interdisciplinary topic. Advanced courses target knowledge typical in college-level courses and require students to develop and apply the higher order thinking skills called for in college courses. Advanced courses are designed to provide the greatest possible challenge for students who have shown sustained commitment and achievement in a particular discipline. Departments determine whether students have demonstrated mastery of prerequisite skills necessary for success in Advanced courses.

CRITERIA for an ADVANCED COURSE at CATE

An Advanced course:

- Is designed with department objectives and our curricular and pedagogical frameworks as guiding principles.
- Offers a challenging, demanding, and intellectually rigorous experience in an academic discipline to students who have demonstrated the interest, skills, and attitudes necessary for advanced work.
- Requires the application of skills and content acquired and mastered in earlier course work in the discipline or interdisciplinary area.
- Expects higher order thinking, advanced skill development and mastery of essential knowledge in the discipline(s).
- Involves independent work and inquiry that requires students to ask and answer questions of interest to them and of real value and meaning in the academic discipline.
- Places emphasis on depth of inquiry and student initiative.
- Includes assessments that are open-ended and designed so that students are required to practice the discipline. (“do the discipline” and be college-level historians, scientists, artists, mathematicians, etc.).
- Is consistent with the University of California criteria for an honors level course in the academic discipline.

IMPORTANT NOTICE

The following pages provide information about courses offered by each department. It is possible that a course listed here may not be taught next year if enrollment based on student demand is low. In some cases, a core and an honors course may be offered as one co-enrolled course either by design or because enrollment in either the core or honors course is low enough to have the courses combined. It is critical for students to understand that we build our schedule based on their course selections and therefore we cannot guarantee our ability to accommodate course selection changes made after June 1, 2024.

ARTS DEPARTMENTS

Graduation requirements: Foundation Arts in the ninth grade. At least one half-credit yearlong course in visual or performing arts in the 10th grade. At least one half-credit full-year course in the 11th or 12th grade.

Students in good academic standing are permitted to request a half-credit arts course that will not be counted against their overall course load. Full-credit arts courses are treated in the same manner as all other full-credit courses.

Yearlong courses offered by the Performing Arts Department and the Visual Arts Department range from half-credit introductory and intermediate courses to full-credit courses at the advanced level that fit readily into most students' courses of study, and allow students to benefit from continuous involvement in the arts.

Foundation Arts

AFoundArts

Yearlong, full credit - 1 Course Unit

All ninth-grade students take Foundation Arts. Through direct experience and practicing different forms of art, Foundation Arts students are introduced to some functions of Visual and Performing Arts including but not limited to expression, connection, and aesthetic appeal. Through exploration of a variety of materials and concepts, project-based work, collaboration, and group learning, students develop the ability to recognize strengths and areas for improvement in their own work, and how to capitalize on feedback. Students work with many members of the Visual and Performing Arts Departments to engage in learning in a variety of mediums and art forms.

PERFORMING ARTS

DANCE

Dance Choreography and Techniques

ADanceCheor

Yearlong, half credit - 0.5 Course Unit

This course will explore the art of choreography in different styles like modern, classical, lyrical, hip hop, and cultural dance, as well as special techniques associated with the creation of dance, including research, design and execution. Students will watch films of great dance pieces, create original combinations, and build them towards a performance which can happen throughout the year.

Cate Dance Company

ADanceComp

Yearlong, half credit - 0.5 Course Unit

Cate Dance Company is the school's most advanced dance troupe. The class focuses on developing advanced level pieces with an emphasis on performance. Dancers will be expected to reach a level of excellence in technique, memorize all pieces, choreograph regularly, create and maintain a positive community of dancers, and perform on and off campus for a variety of audiences. Enrollment in this course is by audition.

Advanced Dance

AAdvDance

Yearlong, full credit - 1 Course Unit

Seniors enrolled in Dance Company and Dance Choreography & Techniques are eligible to request instructor approval for this course. Those courses will be bundled into one full credit course called Advanced Dance. In addition to attending these classes and serving as a leader in those groups, the students will be asked to participate in extra performance opportunities. Out-of-class work will include increased focus on dance history, appreciation, techniques, training in a variety of styles, and choreography/improvisation. Students are required to participate in dance convocation and they must either choreograph, teach or perform in an additional performance during the school year.

THEATRE

Theater Performance 1

ATheaterPerf1

Yearlong, half credit - 0.5 Course Unit

This course is designed to familiarize students with the theater – its intent, structure, effectiveness, and value – through performance. Through the study of a wide variety of scenes, monologues and short plays, students in Theater Performance 1 will be able to: communicate effectively and work cooperatively with an ensemble; take creative risks; develop physical, vocal, and mental skills through active participation in warm up and acting exercises; analyze text to determine author's intent and historical/cultural context; and constructively evaluate and critique their own work as well as being able to deliver tactful and thoughtful criticism to others.

Theater Performance 2

ATheaterPerf2

Yearlong, half credit - 0.5 Course Unit

This course is designed to familiarize students with the theater – its intent, structure, effectiveness, and value – through performance. Theater Performance 2 students will be called upon to demonstrate and model these skills in a mentorship role, building toward the ultimate goal of directing scenes and leading class exercises. Prerequisite: Theater Performance 1 or permission of the department.

Theater Performance 3

Yearlong, half credit - 0.5 Course Unit

Theater 3 provides students who have successfully completed Theater 1 and 2 the opportunity to develop skills in specific aspects of the genre. Each student will elect to focus on either acting, writing, or dramaturgy in this course. Assessments will include performances, short plays, or research papers; this work will be determined at the onset of the course and presentations, performances and submissions will be due at the end of each trimester.

Advanced Theater

AAAdvTheater

Yearlong, full credit - 1 Course Unit

This course is open to 12th Grade students who have successfully completed Theater 1 and 2, or those receiving instructor approval. The class meets twice a week with one added hour for advanced-level work in directing, performing, or writing for live audiences. Students are required to participate in at least one mainstage production and they must either direct, write or perform in an additional **show** during the school year. Advanced Theater students will explore significant theatrical movements and practitioners and they will study classical, contemporary and experimental works. Each member of the group will lead in-class workshops, complete industry-standard auditions and perform solo and collaborative monologues and scenes for assessment.

Technical Theater Production 1

ATechTheat1

Yearlong, half credit - 0.5 Course Unit

This course is designed to help students develop a practical knowledge of theater through production analysis, technical design and construction. Through hands on instruction, Technical Theater Production 1 students will learn to manage and care for the theater space and equipment, implement basic sound, lighting and scenic designs for theater events, collaborate and communicate effectively, and combine purpose with artistry.

Technical Theater Production 2

ATechTheat2

Yearlong, half credit - 0.5 Course Unit

This course is designed to help students develop a practical knowledge of theater through production analysis, technical design and construction. Technical Theater Production 2 students will be called upon to demonstrate and model these skills in a mentorship role, building toward the ultimate goal of managing the crew to help create and implement their own designs. Prerequisite: Technical Theater Production 1 or permission of the department.

Technical Theater Production 3

ATechTheat3

Yearlong, half credit - 0.5 Course Unit

This course is designed to help Technical Theater Production 3 students develop a practical knowledge of theater through production analysis, technical design, and construction. Prerequisite: Technical Theater Production 2 or permission of the department.

Advanced Technical Theatre Production

AAAdvTechTheatPr

Yearlong, full credit - 1 Course Unit

This course is available to 12th grade students who have completed Theater Tech 1 and 2 and/or have been approved by the department/instructor. Students will be enrolled in the Theater Tech class and are expected to help design both our mainstage and smaller scale productions. They will be called upon to be leaders in the department and required to participate as tech for all three mainstage productions: Fall Play, Dance Convocation, and the Spring Musical. In addition, students will complete extra assignments. For example, a student may research a particular element of sound, lighting, set-design, or costume/hair-makeup. They will also study, implement and delve deeper into the role of being a theater designer.

VOCAL MUSC

Chorale

AChorale

Yearlong, half credit - 0.5 Course Unit

This course is designed to foster an understanding of choral music and a love of singing. By participating in the ensemble, students will be expected to: prepare choral repertoire for public performance; develop musicianship skills, such as pitch and rhythmic accuracy, and sight-singing; develop vocal and breathing technique, tone production, and diction; expand their individual potential within a group context; and identify the historical context for the choral selections and explain their cultural relevance. No previous experience is required, and this course is open to all students.

Chamber Choir: Camerata

ACamerata

Yearlong, half credit - 0.5 Course Unit

Camerata is an advanced singing group that explores a wide variety of genres and styles from 16th century madrigals to contemporary pop songs. Singers will be expected to: prepare choral repertoire for public performance; build and practice exemplary vocal and breathing technique, tone production, and diction; hone their sight reading and musicianship skills; expand their individual potential within a group context; and identify the historical context for the choral selections and explain their cultural relevance. Enrollment in this course is by audition. Pre-requisite: Chorale; This course is only open to grades 10-12, based on scheduling.

Chamber Choir: Contemporary A Cappella

AAcappella

Yearlong, half credit - 0.5 Course Unit

No Strings Attached, the current name of the ensemble, is the most advanced pop singing group. The a cappella band focuses primarily on modern popular genres such as rock, folk, musical theater, and rhythm and blues. Singers will be expected to: reach a level of excellence in sight-reading, style, and tone, learn and memorize all presented music, create and maintain a community of companionship through voice, and perform on and off Cate campus regularly. The maximum enrollment size is 9 students. This course meets twice a week in the evenings. Pre-requisite: Chorale; Co-requisite: Camerata. Enrollment in this course is by audition. This course is only open to grades 10-12, based on scheduling.

Advanced Vocal Music

AAdvVocal

Yearlong, full credit - 1 Course Unit

Seniors simultaneously enrolled in Camerata and No Strings Attached are eligible to request instructor approval for this course. In addition to attending classes for and performing with both ensembles, students will meet weekly with the instructor to arrange and/or compose music for a vocal ensemble; select, prepare, and conduct choral repertoire; and select, prepare, and perform solo repertoire. Out-of-class work will include increased focus on music theory, ear training, and sight singing.

INSTRUMENTAL MUSIC

Music Production 1

AMusicProd1

Yearlong, half credit - 0.5 Course Unit

The fundamentals of songwriting and studio recording will be covered. This is for beginners. For songwriting, we will learn about writing chord changes, lyrics, form, beats, melodies and bass lines. In the studio, we will cover various Digital Audio Workstations (Logic, Pro Tools), loops, mid keyboards, recording techniques, and mixing songs. This class is open to 10th, 11th and 12th graders. 9th graders may be approved by the instructor.

Music Production 2

AMusicProd2

Yearlong, half credit - 0.5 Course Unit

A deeper look into songwriting and studio recording. This is for second year producers. For songwriting, we will learn about writing more complex and pro-level chord changes, lyrics, form, beats, melodies, and bass lines. In the studio, we will cover a more detailed look at Logic and Pro Tools, the SSL console, mic placement, working with live musicians, and more complex mixing strategies. Prerequisites: Music Production 1

Music Production 3

AMusicProd3

Yearlong, half credit - 0.5 Course Unit

These third-year producers will become leaders in the recording studio. They will lead recording and songwriting sessions with performing artists. Trips to professional studios will be arranged. They will assist younger students in creating chord changes, lyrics, form, beats, melodies, and bass lines. In the studio, they will become prolific at Logic and Pro Tools tips and tricks, learn detailed elements of the SSL console, work with live musicians regularly, record school concerts, and learn more pro-level mixing strategies from guest speakers. Internships in pro studios can be arranged. Prerequisite: Music Production 2

Jazz Big Band

AJazzBand

Yearlong, half credit - 0.5 Course Unit

This is a performance-oriented course designed for musicians who wish to play jazz music. Students are introduced to the elements of improvisation including jazz harmony, soloing strategies and ensemble playing. Selected music will span the history of jazz, from Dixieland to Big Band and Bebop to Modern. Performances are scheduled throughout the year at various Cate School events and students are required to perform at each show. In order to participate, students should be comfortable reading music notation at a basic level. If a student needs skill development before joining these ensembles, we can arrange for private lessons through our school programs.

Jazz Combo

AJazzCombo

Yearlong, half credit - 0.5 Course Unit

For students who want to focus on playing jazz standards and performing in public. This class will emphasize jazz soloing techniques, jazz chord progressions, walking bass lines and drum set grooves. Students will gig often in concerts on and off campus. Guest speakers will offer their perspectives on jazz soloing concepts. An emphasis on professionalism and self-motivated practice will be reinforced. Enrollment in this course is by audition.

Orchestra

AOrchestra

Yearlong, half credit - 0.5 Course Unit

This is a performance-oriented course designed for string, woodwind, brass and percussion players who wish to play classical music with fellow musicians. Unique repertoire will be selected for each performance based on the abilities and skill levels of the group. Several performances are scheduled throughout the year and students' participation is required at all of them. In addition to regular rehearsals and performances, there may be occasional sectionals, master classes and musical quizzes scheduled. In order to participate, students should be comfortable reading music notation at a basic level. If a student needs skill development before joining these ensembles, we can arrange for private lessons through our school programs.

Chamber Ensemble

AChamberEnsem

Yearlong, half credit - 0.5 Course Unit

This is a performance-oriented course designed for more advanced string, woodwind, brass and percussion players. Students will be placed in 2-5 member ensembles. Unique repertoire will be selected for each performance based on the abilities and skill levels of the group. Several performances will be scheduled throughout the year and students' participation is required at all of them. In addition to regular rehearsals and performances, there may be occasional sectionals, master classes and musical quizzes scheduled. Enrollment in this course is by audition.

Rock Band

ARockBandEnsem

Yearlong, half credit - 0.5 Course Unit

This course will break into groups to play rock music: rock, funk, electronic, and pop. Music theory, music history and songwriting concepts will be discussed. Students will learn how to write their own pieces, record them in the studio, and perform for live audiences. An emphasis on professionalism and self-motivated practice will be reinforced. This class is open to all interested rock musicians.

Advanced Instrumental Music

AAAdvInstruMusic

Yearlong, full credit - 1 Course Unit

In this course, students will participate in two instrumental music classes at the highest level (either jazz combo and jazz band, or chamber ensemble and orchestra). Those courses will be bundled into one full credit course called Advanced Instrumental Music. In addition to attending these classes and serving as a leader in those groups, the students will be asked to participate in extra recitals, perform at special events, and complete appropriate college-level assignments in music theory, music appreciation, ear training and composition/arranging throughout the year. Open only to 12th graders who have been approved by the department.

Advanced Multidisciplinary Performing Arts

AAdvMDPerfArt

Yearlong, full credit - 1 Course Unit

Advanced Performing Arts is designed for students who have progressed beyond the intermediate level in their studies in the performing arts. The purpose of this course is to provide Cate's most accomplished and engaged artists the opportunity to pursue individual, directed studies in an environment that allows them to see and learn from each other's work. Students who specialize in various disciplines will have the opportunity to develop performing art pieces alongside one another. Students will execute challenging individualized projects and offer them in performance settings, while coming together regularly to investigate advanced principles of the performing arts, to develop critical and analytical skills, and to learn from the challenges and processes being undertaken by their peers. Students who wish to prepare and submit a portfolio for college applications and/or awards programs will be prepared and supported in doing so. This course carries the advanced designation and weighting. Prerequisite: level 2 performing arts course and permission of the Department.

COMMUNITY COURSES IN THE PERFORMING ARTS

The following courses are offered to any student who wishes to participate without having to complete homework that earns academic credit. These courses will not earn grades, will not appear on students' transcripts and will not affect a student's GPA. Attendance is required for those who sign up.

Community Chorale

Yearlong, no credit

ACommChorale

This course is designed to provide students with an enjoyable choral experience that strives towards the same goals as credited Chorale without the added out-of-class workload. In other words, Community Chorale students are required to attend the same rehearsals and performances and learn the same music as their credited Chorale classmates, but they are not required to complete any homework or assessments. Students may join for the entire year, from the beginning of the year through Winter Break, or after Winter Break through the end of the year. If students are interested in auditioning for Camerata or No Strings Attached, they must be enrolled in credited Chorale. No previous experience is required, and this course is open to all students.

Community Theater: Improvisation

ACommTheatImpro

Yearlong, no credit

Community Improv is open to students in grades 9-12. The group meets once a week and involves no out-of-class time work. Participants explore short and long form improvisation, create occasional teams for "cage-match" competitions, and watch examples of classical and contemporary improvisors such as Del Close, Augusto Boal, Viola Spolin, Michael Keegan Key, Amy Poehler, etc. Experienced student-directors will lead games and captain teams throughout the year. While the course is open to all Cate students, it may also be used by Advanced Theater students to fulfill one part of their requirements for the Advanced Theater course.

Community Technical Theatre

Yearlong, no credit

Community tech offers students the opportunity to explore different aspects of the technical elements of theater without the homework and assignments. This class would meet once a week during M block where students would be helping to construct sets, hang lights, work with power tools as well as clean and organize backstage. Students would also be encouraged to help with assemblies.

ACommTechTheat

VISUAL ARTS COURSES

Ceramics 1

ACeramics1

Yearlong, half credit - 0.5 Course Unit

Ceramics 1 students spend the majority of the year learning how to throw and trim clay on the pottery wheel. By the end of the year, students will be able to throw and trim bowls, platters, vases, jars with lids, pitchers, jugs, mugs, and ultimately, a teapot. The focus of Ceramics 1 is indeed the development of basic throwing skills; however, basic decorating practices are also utilized to enhance each piece. By the end of the year, students will begin to demonstrate through the glazing of their pieces a harmony in the relationship between a form and its colors and decoration.

Ceramics 2

ACeramics2

Yearlong, half credit - 0.5 Course Unit

This course focuses on more sophisticated throwing and trimming techniques and offers opportunities for greater self-expression using clay as the medium. While the emphasis is on throwing and trimming, hand-building and slab construction are important aspects of the curriculum. By the end of the year, students will be able to create larger forms by throwing sectionals and using a variety of slab construction techniques. Greater focus is devoted to general aesthetic principles in Ceramics 2, and time is spent comparing classical western ideals with those of a strong Japanese influence within the world of ceramic art. By the end of the year, students will have used a variety of more advanced decorating techniques – including slip trailing, carving, incising, and fluting – to capture elements of these different perspectives on aesthetics in ceramics. Prerequisite: Ceramics 1 or permission of the department.

Ceramics 3

ACeramics3

Yearlong, half credit - 0.5 Course Unit

This course provides an ambitious and intensive exploration of the expressive and functional aspects of stoneware. Students design their own projects with an emphasis on in-depth exploration of form, design, decoration and glazing. Prerequisite: Ceramics 2 or permission of the department.

Digital Arts 1

ADigArts1

Yearlong, half credit - 0.5 Course Unit

In Digital Arts 1 students explore a variety of hardware and software tools that enable new forms of creative expression. In addition to introducing the Adobe Suite, the course builds a foundation in computational thinking and computer programming in the context of art and design. Employing code as a medium, students create “algorithmic” sketches, interactive web portfolios, audio-reactive projection mapping visuals, and other digital artifacts.

Digital Arts 2

ADigArts2

Yearlong, half credit - 0.5 Course Unit

Building on what students learned in Digital Arts 1, students will continue to advance their computer science and artistic design skills. Recursive fractals, image pixel manipulation, and virtual reality are just a few examples of advanced computer graphics projects explored through code. Moving off the screen, students will also explore alternative modes of digital output using Arduinos, 3D printers, laser cutters, robotic pen plotters, and more. Prerequisite: Digital Arts 1 or permission of the department.

Digital Arts 3

ADigArts3

Yearlong, half credit - 0.5 Course Unit

By Digital Arts 3, students will have exposure to a diverse set of emerging tools and technologies for computational design. Working in response to open-ended creative prompts, students will develop their own projects at the intersection of art and technology. For each project, students must demonstrate both technical competency and visual acuity, explore new digital forms and mediums, and produce innovative work that pushes the boundaries of creative expression. Prerequisite: Digital Arts 2 or permission of the department.

Photography 1

APhoto1

Yearlong, half credit - 0.5 Course Unit

Students will be introduced to photography as a medium for communicating information and ideas in effective visual forms. Over the course of the year students will learn how to shoot manually on a DSLR camera and organize their files on a hard drive. In addition to these technical skills, topics include photo composition, studying light, and use of related software (Adobe Photoshop and Lightroom). Students may have opportunities to explore additional mediums such as filmmaking or film photography throughout the year. Students will print and present their completed work for in class critiques.

Photography 2

APhoto2

Yearlong, half credit - 0.5 Course Unit

This course explores intermediate photographic and digital techniques and concepts. This course is an extension of the techniques learned in Photography 1. Students will study other photographers, explore and grow their own style and aesthetic, and dive deeper into different editing and photography techniques. Students will be introduced to alternative techniques and mediums, such as shooting film and developing prints in a darkroom. Prerequisite: Photography 1 or permission of the department.

Photography 3

APhoto3

Yearlong, half credit - 0.5 Course Unit

This course explores advanced photographic and digital techniques and concepts and is an extension of the techniques learned in Photography 2. Students will plan, shoot, develop and print bodies of work that are conceptually motivated and technically proficient. Topics in Photography 3 include contemporary and historical discourse, lifestyle & documentary photography, non-traditional approaches to photography, and beyond. Prerequisite: Photography 2 or permission of the department.

Studio Art 1

AStudioArt1

Yearlong, half credit - 0.5 Course Unit

Through a series of structured and open-ended assignments, students will develop creative and technical skills through work in a variety of media and forms of expression. Drawing, painting, printmaking, and 3D thinking are among the many techniques students may use. Projects are increasingly ambitious, and students develop pieces of high quality. Students learn to manage and assess their own pieces and to critique each other's work constructively.

Studio Art 2

AStudioArt2

Yearlong, half credit - 0.5 Course Unit

Studio 2 is recommended for students who want to stretch their developing skills in 2D and 3D concepts. Students will deepen their capacity for creative thinking, working with the media introduced in Studio 1 plus new forms of art and materials. In addition to responding to more challenging concepts, their practice will be enhanced by exploring what it means to create in the 21st century. Students will begin to develop portfolios at this level. Prerequisite: Studio 1 or permission of the department.

Studio Art 3

AStudioArt3

Yearlong, half credit - 0.5 Course Unit

Students enrolled in Studio 3 will have the opportunity to expand their technical and creative abilities through fabrication and material emphasis. Projects are designed to cultivate work that is informed by a social and cultural narrative as well as an art historical perspective. Through exploring different 2D and 3D techniques with an emphasis on the conceptual, students may design and respond to work of non-traditional materials. Students who wish to prepare a portfolio will be prepared and supported in doing so. Prerequisite: Studio 2 or permission of the department.

Advanced Art

AAdvArt

Yearlong, full credit - 1 Course Unit

Advanced Art is designed for students who have progressed beyond the intermediate level in their studies in the arts. The purpose of this course is to provide Cate's most accomplished and engaged visual artists the opportunity to pursue individual, directed studies in an environment that allows them to see and learn from each other's work. Students who specialize in various disciplines will have the opportunity to develop their artwork alongside one another. Students will execute challenging projects while coming together regularly to investigate advanced principles of the arts, to develop critical and analytical skills, and to learn from the challenges and processes being undertaken by their peers. Students who wish to prepare and submit a portfolio will be prepared and supported in doing so. This course carries the advanced designation and weighting. Prerequisite: Level 2 Arts course *and* permission of the department.

Advanced Art History

AAdvArtHist

Yearlong, full credit - 1 Course Unit

Advanced Topics in Art History is a course that explores the history of art making, architecture, contemporary art theory, and visual culture. Through thoughtful writing, observation, hands-on experiences and art historical analysis, students will engage in creative thinking and visual analysis of artistic expression throughout history. Students will be introduced to a range of interdisciplinary frameworks that will challenge them as they analyze the conceptualization of art and connect historical concepts and theory to their own work. This course is not monolithic and will challenge the art historical canon as students construct themes between historical works and contemporary practices. Open to 12th graders; 11th graders if space is available.

ENGLISH DEPARTMENT

Graduation Requirement: A yearlong course per year through the 11th grade, and a trimester course in the fall, winter, and spring of the 12th grade year.

Humanities (English and History)

IHumanities

Yearlong, full credit - 2 Course Units

A yearlong course in the 9th and 10th grades, 9th-grade Humanities serves as a gateway course to learning at Cate and to Cate's culture of inquiry. Multidisciplinary in nature and closely coordinated across teaching pairs, it follows the practices of the humanities by exploring essential questions of human nature and the diversity of human experience. Specifically, we engage with authentic, anchoring artifacts in literature, history, art, architecture, and religion drawn from the classical to early modern historical eras. We also explore present-day connections, highlighting the relevance of our topics of study and drawing in multiple perspectives. With an emphasis on disciplined student inquiry, meaningful discussion and oral presentations, creative and analytical writing, and research, the course builds the skills and knowledge that are needed for success in the 9th-grade year and beyond.

English 10

EEnglish10

Yearlong, full credit - 1 Course Unit

In the 10th grade, students read challenging works in all major literary genres (poetry, short stories, essays, drama, memoirs, and novels); they also write extensively, study grammatical principles, learn new vocabulary, and contribute regularly to classroom debates and discussions. Our second-year course emphasizes the effective use of sensory detail and narrative structure in personal writing; students also continue to practice forming, developing, and supporting ideas in analytical writing. As readers, Cate sophomores are trained in more sophisticated forms of literary response; they learn to identify the elements and purposes of many types of creative expression and to shape their insights into clear, defensible statements. Finally, students continue to hone their listening and speaking skills in the classroom, expressing themselves clearly and responding carefully to the views of others.

English 11

EEnglish11

Yearlong, full credit - 1 Course Unit

In the 11th grade, students read American fiction, nonfiction, drama, and poetry; they also write regularly in several forms and study the advanced principles of grammar. The junior-year writing curriculum introduces new skills in all modes while reinforcing the skills learned in prior years. Teachers focus on strategies for achieving dynamic description and narration in stories and personal essays; of equal importance are the methods of investigation, persuasion, and argumentation in analytical work. Students are increasingly responsible for the success of classroom conversation, and they are expected to exhibit open-minded and respectful partnership in the many discussions, workshops and presentations that comprise the junior year at Cate.

Advanced English 11

EAdvEng11

Yearlong, full credit - 1 Course Unit

Advanced English 11 is a challenging course designed to prepare students for the reading and writing assignments they'll encounter in literature courses at the college level. The reading assignments are occasionally longer, the writing assignments are more frequent, and there is an increased emphasis on analytical skills: close scrutiny of language, demonstrating an awareness of rhetorical devices; facility of interpretation, including the secure use of abstract terms; and logical argumentation, including the use of quotation and secondary sources. Students are increasingly responsible for independent synthesis of all elements of a reader's experience into original and coherent ideas. The selection process for Advanced English 11 is competitive. In addition to reviewing each student's record in English 10, the department takes into account the results of the annual qualifying essay and a comprehensive assessment of effort inclusive of class participation.

Advanced English 12: Introduction to Modernism

E1AdvEng12

Fall trimester, full credit - 1 Course Unit

Advanced English 12 is an especially rigorous and challenging course. Command of the fundamentals of literary study is assumed, and students invited into the course are required to think and write independently and to take responsibility for the success of all workshops and discussions. As readers, they are expected to be capable of making nuanced inferences and of articulating sophisticated views supported by thoughtful analysis of the text. As writers, they are expected to be capable of independently crafting essays that demonstrate mastery of a wide range of creative and analytical skills. Classes are conducted in the model of a college seminar and students must be committed to ownership and leadership of discussions. All seniors must take Advanced English 12: Introduction to Modernism in the fall trimester.

The first trimester of Advanced English 12 provides a common experience for all students and consists of two major units, the Writing Period and Modernism. Both units seek to provide opportunities for the development of voice through frequent writing and revision and through self-directed inquiry, discussion, and presentation. During the Writing Period, students focus intently on the personal narrative, before shifting to reading poetry and short stories from the Modernist movement of the late 19th and early 20th centuries. This unit culminated in an inquiry project that asked students to generate a thesis around the observation of Modernist tendencies in works from different media and eras, signaling a transition from a purely analytic to a more synthetic way of thinking.

WINTER ADVANCED ENGLISH 12 ELECTIVES

In addition to the winter trimester courses below, the English Department also offers a two-term Fall and Winter interdisciplinary elective which students can enroll in for either English or Science credit. Course description and registration information can be found in the “**Interdisciplinary Electives**” section of this Registration Booklet. This course is:

English Elective: American Wilderness
Science Elective: American Wilderness

E23AmWilderness
S23AmWilderness

Advanced English 12: Epic Tales from the Past: Courage in Times of Chaos E2AdvEpicTales *Trimester, full credit - 1 Course Unit*

This course will focus on two “classic” epic tales, Homer’s *The Iliad* from ancient Greece (ca. 750 BCE) and *Beowulf* from medieval England (ca. 1000 CE). In addition to examining the literary elements and associated texts for these works, we will also explore their historical and archaeological contexts, as well as their ongoing relevance to our own world and lives. Among other themes that will arise out of student interest, this course will consider the question of how humans draw upon different types of courage as they face tumultuous circumstances that are not always of their own making or in their control.

Advanced English 12: Comparative Religions *Trimester, full credit - 1 Course Unit*

E2AdvCompReligions

Comparative Religion provides seniors the opportunity to read and to compare sacred texts drawn from a wide variety of religious traditions around the globe. These include excerpts from *The Bible* (old and new testaments), *The Diamond Sutra*, the koans of Mumon, the *Quran*, the poetry of Rumi and Nizami, the revelations of St. Julian and St. Teresa, *The Tao Te Ching*, *The Upanishads*, and *The Bhagavad Gita*, the discourses of the (Aztecan) Elders, and *Black Elk*. When it suits, we may dip into more patently literary texts that feature sacred books and wisdom, but for the most part, our purpose will be to sample and compare diverse texts of allegedly divine inspiration, and the challenge posed by reading these works in the same faith as they were written, which is to say both critically, openly, and reverently.

Advanced English 12: Unconventional Heroines *Trimester, full credit - 1 Course Unit*

E2AdvHeroines

In this reading and writing intensive course, students will follow the daring -- or at least unusual -- paths of female protagonists who choose to live their lives a little differently. Students will devote most of the trimester to Jane Austen's *Pride & Prejudice*, alongside a variety of short stories by female authors who earned their reputations by ignoring and (even defying) societal norms.

Advanced English 12: Do the Right Thing

E2AdvDoRight

Trimester, full credit - 1 Course Unit

In this course we'll see how even the most morally upright characters can find themselves mired in sticky ethical dilemmas. We'll read a variety of works that provide riveting examples of this awful but all-too-familiar human experience. Our list of possible authors includes Kate Chopin, Joseph Conrad, Haruki Murakami, Isabel Allende, T. C. Boyle, and Viet Thanh Nguyen – all of whom show us that it's not always easy to do the right thing!

Advanced English 12: Creative Writing Workshop

E2AdvCrWriting

Trimester, full credit - 1 Course Unit

In addition to providing Cate students a taste of how writing workshops operate at the undergraduate and post-graduate level, this class is designed to permit as much creative freedom as possible to those students who will benefit from it, while at the same time providing clear objectives to students who may need more guidance. Each of the first seven weeks of the trimester is dedicated to examining one specific element of creative writing – stream-of-consciousness, dialogue, character description, etc. The expectation is that by trimester's end, all students – whether working on longer, original pieces or shorter exercises -- will be using these skills more judiciously, and in service of work that is both more substantive and personally significant.

Advanced English 12: Climate Fiction

E2AdvCliFic

Trimester, full credit - 1 Course Unit

In this reading and discussion-intensive course, students will explore the world of climate fiction—not necessarily speculative fiction that comments upon the global climate crisis. The roots of this genre are in dystopian literature and science fiction although climate fiction is also tinged with both realism and the supernatural. We will focus on a close reading of Octavia Butler's novel, *Parable of the Sower*, and will read excerpts and works of short fiction and poetry by Margaret Atwood, Paolo Bacigalupi, Ray Bradbury, Franny Choi, and Omar El Akkad, among others. We will examine a variety of literary techniques in these works (e.g., the use of metaphor, symbol, language, moral fable, and structure) and will consider how storytelling may help us imagine the possibilities of our agency in affecting change.

Advanced English 12: Staging Activism

E2AdvStagingAct

Trimester, full credit - 1 Course Unit

This course will explore the theatricality of activism from a global perspective. In the first part of the course, students will be introduced to writers and practitioners who have used literary and dramatic techniques as a catalyst for change. Arguing that protest is performative, the second half of the course will look at current and past uprisings such as the Prague Spring (1968), Mai '68 (France), The Arab Spring (2011), Bloody Sunday (N. Ireland 1972), Black Lives Matter Marches (2019-present), Hong Kong Protests (2019-2021), Mahsa Amini Protests (Iran, 2022-2023) in terms of semiotics and social impact. The final assignment asks students to develop inquiry-based projects inspired by the protests and plays considered throughout the course.

SPRING ADVANCED ENGLISH 12 ELECTIVES

In addition to the spring trimester courses below, the English Department also offers a spring interdisciplinary elective which students can enroll in for *either* English *or* History credit. Course description and registration information can be found in the “**Interdisciplinary Electives**” section of this Registration Booklet. This course is:

Advanced English Elective: Radical California History	E3AdvRadicalCal
Advanced History Elective: Radical California History	H3AdvRadicalCal

Advanced English 12: Much Madness—An Inquiry into Literature and Mental Health

23AdvMuchMad

Trimester, full credit - 1 Course Unit

‘Much Madness,’ which takes its name from the poem by Emily Dickinson, is a senior elective dedicated to exploring the variety of ways in which the margins of mental health have been depicted in literature – whether as demonic possession, divine inspiration, personal trauma, or personal chemistry. We began by orienting ourselves to the current landscape, familiarizing ourselves with the DSM and reading the work of more contemporary clinicians and writers such as Lauren Slater and Esmé Wang. We then turn our attention to more remote and wide-ranging texts -- from the New Testament to Hamlet, Virginia Woolf and Toni Morrison, Dostoevsky, Plath, Nabokov, Nijinsky and Kanye. Students keep on-line journals, responding both freely, personally, and to prepared prompts. The trimester concludes with presentations from each student on an artist of their choosing, featuring what we know of their struggle with mental health, and how it manifests in their art.

Advanced English 12: Writing for Stage and Screen

E3AdvWrStageScr

Trimester, full credit - 1 Course Unit

'From Page to Performance' is a senior elective designed to provide students with the chance to apply their literary skills to the particular challenges of dramatic writing. To orient and familiarize them with the new and different media, we read and watch various samples of stage writing and screenwriting. Otherwise, the class is run as a workshop, meaning that we spend most of our time reading the class's own work, submitted at a variety of different stages, for the whole group to react to in the spirit of constructive criticism. The trimester is built around four assignments: one scene transcription; an original stage piece; a cinematic adaptation; and an original final project (either stage or film). As such, the workshop functions as both the ongoing exercise of a new skill set, and a prolonged inquiry into what good dramatic writing consists of, how we recognize it, and how we might incorporate its techniques into our own writing.

Advanced English 12: Mayhem on the Moors

E3AdvMayhem

Trimester, full credit - 1 Course Unit

Fasten your seatbelt for a wild ride! In this course we'll read Emily Brontë's *Wuthering Heights*, a Gothic novel that has shocked and thrilled readers since its original publication in 1847. Among the many characters we'll get to know is Heathcliff, who loves – and loathes – with legendary passion.

Advanced English 12: Latin American Short Stories

E3AdvLatinAm

Trimester, full credit - 1 Course Unit

In this class we'll read stories by several innovative and influential Latin American authors, such as Jorge Luis Borges, Julio Cortázar, Isabel Allende, Gabriel García Márquez, and Juan Rulfo.

Open-minded, free-thinking types are most likely to appreciate the unusual -- often experimental -- material that will form the basis of this course.

Advanced English 12 Introduction to Film

E3AdvIntroFilm

Trimester, full credit - 1 Course Unit

An introduction to film as a medium for storytelling, this discussion-based course will focus on the elements of filmmaking, including history, cinematography, sound, editing, acting, directing, and the methods by which one "reads" a film. The abiding purpose is to examine each film as a purposefully created universe, whose tone, color, language, framing and speed are all a product of specific and discernible choices. Thus we will study filmmaking and film theory in order to engage in informed analysis of cinematography, editing, and screenwriting. Selected films will cover a variety of genres including drama, comedy, thriller, documentary, and animation. In order to experience films as cohesive narratives, one class each week will extend into an attached "lab" period, allowing us to watch feature-length movies in one sitting.

Advanced English 12: Introduction to Journalism

E3IntroJourn

Trimester, full credit - 1 Course Unit

Students will learn about the fundamentals of journalism in the context of a democratic society and practice their learned skills by writing articles, conducting interviews, taking pictures, crafting multimedia pieces, and chasing down elusive leads as they build out and maintain the School's campus online newspaper, El Batidor. Student editors will work to lead activities, model journalistic writing, edit peers' work, and publish within the Cate School community and beyond.

HISTORY DEPARTMENT

Graduation Requirements: Three years of history, including 9th-grade Humanities, 10th-grade World History, and 11th-grade US History.

Humanities (History and English)

IHumanities

Yearlong, full credit - 2 Course Units

A yearlong course in the 9th and 10th grades, 9th-grade Humanities serves as a gateway course to learning at Cate and to Cate's culture of inquiry. Multidisciplinary in nature and closely coordinated across teaching pairs, it follows the practices of the humanities by exploring essential questions of human nature and the diversity of human experience. Specifically, we engage with authentic, anchoring artifacts in literature, history, art, architecture, and religion drawn from the classical to early modern historical eras. We also explore present-day connections, highlighting the relevance of our topics of study and drawing in multiple perspectives. With an emphasis on disciplined student inquiry, meaningful discussion and oral presentations, creative and analytical writing, and research, the course builds the skills and knowledge that are needed for success in the 9th-grade year and beyond.

Modern World History

HWorldHist

Yearlong, full credit - 1 Course Unit

This 10th-grade course takes a case study approach to explore the histories of Asia, Europe, and Africa through four core themes: nationalism, imperialism, sovereignty, and resistance. Throughout the course, students seek out alternative perspectives and approach differing opinions with an inquiry mindset and willingness to listen and learn. Students are also asked to interrogate the impact of unequal power relations and discriminatory ideologies from a variety of perspectives, both historically and today, and to recognize bias when weighing evidence. Students further develop inquiry-based research, TEAC analytical writing, primary source analysis, critical and close reading, and oral presentation skills and engage in active classroom discussion and deliberations.

United States History

HUSHistory

Yearlong, full credit - 1 Course Unit

This 11th-grade course develops students' abilities as critical thinkers, researchers, and writers through sustained inquiry into a range of primary and secondary sources, class discussions, and a variety of written assessments. Balancing the breadth of a survey with the depth afforded by close examination of artifacts, students engage with the origins and evolution of the United States, focusing particularly on various crises that beset the country in the 18th, 19th, and 20th centuries. An important goal of this course is to develop an interest in America's past by showing its contemporary relevance.

Advanced United States History

HAdvUSHist

Yearlong, full credit - 1 Course Unit

The Advanced section for 11th grade US History provides a survey of American History with particular emphasis on the use of primary sources, in-depth exploration of topics, and historical scholarship. The course is designed for students who have demonstrated the personal interest, initiative, and high-level skills necessary for success in this more intensive, faster-paced course. Enrollment in the advanced class is limited, and placement is determined by the department, with priority given to students with an A- in 10th grade World History.

ADVANCED HISTORY ELECTIVES

The advanced history seminars are intensive reading and writing courses designed for seniors who have demonstrated sustained interest and success in history during their time at Cate and are credited and weighted as an advanced course. While the themes and content of the course change each trimester, the objective of in-depth analysis of specific historical questions is central in each trimester. Classes are conducted in the model of a college seminar and students must be committed to ownership and leadership of discussions. Prerequisites: Placement is at the discretion of the History Department. Open to rising 12th-graders.

FALL & FALL/WINTER ADVANCED HISTORY ELECTIVES

Advanced History: Modern India

H1AdvModIndia

Fall Trimester, full credit - 1 Course Unit

Picking up with Sophomore World History's brief mentioning of India as Britain's source of opium, this course will position India in its proper place as a massively populous, remarkably diverse, and powerful nation. Following a brief examination of the Sepoy Mutiny as a seminal moment in building Indian nationalism, students will analyze the emergence of the non-violent independence movement led by Mahatma Gandhi and Jawaharlal Nehru before taking a close look at the religious and cultural forces that led to the violent division of the Kashmir region creating West and East Pakistan and India and defining a rivalry that keeps the region on edge to the present. The largest functioning democracy on the planet, the course will assess the sustainability of regular and freely contested elections in a country of over a billion people, many of whom live in poverty. The course will conclude with an inquiry project focused on South Asia in the 21st century.

Advanced History: Anthropological Perspectives

Fall Trimester, full credit - 1 Course Unit

H1AdvAnthro

OR Winter Trimester, full credit - 1 Course Unit

H2AdvAnthro

This trimester elective aims to deepen students' curiosity about the cultural complexity of the world as well as equip students with the anthropological perspectives and skills to better understand and navigate these complexities in their own lives, both locally and globally. Students will begin by deconstructing key anthropological concepts such as ethnocentrism, cultural relativism, culture, and structural violence. In addition to interpreting ethnographic case studies in light of these concepts, students will be challenged to assess themselves using these cultural terms. Students will devote specific attention to exploring anthropological perspectives on race and ethnicity, class and socio-economics, and violence and social repair. Students also will be introduced to two research methods drawn from the field of anthropology: participant observation and ethnography. Skills include critical reading skills, scholarly discourse, student-led deliberations, and ethnographic projects, all of which are evaluated at an advanced level.

Advanced History: Politics in Contemporary America

H1AdvPoliticsAm

Fall Trimester, full credit - 1 Course Unit

Students will explore the general concepts used to interpret U.S. government and politics, as well as examine specific case studies to analyze various political theories and the daily operations of the U.S. government that shape public policy. Taking a problem-based approach in conjunction with deliberations, policy case studies, and a research paper, students will pursue their study of contemporary American politics as active learners as they analyze the issues involved in each case, evaluate the various efforts made to date to address the problem and explore new potential solutions. Students will read, watch, and listen to different media sources in order to find reliable information to create an intellectual and well-informed perspective about contemporary political topics. Participants are required to explore multiple viewpoints as they hone their skills in research, academic writing, and oral communication. Overall, the course gives students the tools to contribute to society as informed and engaged participants.

Advanced History: The Supreme Court and Civil Liberties*Fall Trimester, full credit - 1 Course Unit*

H1AdvSupreCt

OR *Winter Trimester, full credit - 1 Course Unit*

H2AdvSupreCt

This course will focus primarily on the role the Court has played in expanding civil liberties, civil rights, and social justice from the middle of the twentieth century until the most recent rulings. Specifically, we will examine the impacts of *Brown v. the Board of Education of Topeka, Kansas* (1954); the reach of the Court on issues of race, family, gender, and privacy; and the ideological foundation for a conservative movement beginning in the 1970s that helped Republican presidents remake the Supreme Court. Revolution and Counter-Revolution is the lens through which to approach each of these areas of inquiry: The tension between these two forces remains a central political drama and understanding the roots of the conflict will allow us to better participate in the current discussions of the Supreme Court and the debates at the heart of our political system today.

WINTER ADVANCED HISTORY ELECTIVES**Advanced History: 20th Century African American Experience**

H2AdvAfrAmerExp

Winter Trimester, full credit - 1 Course Unit

In this course, we will detail the plight of African Americans since the first slaves arrived in 1619, including a major focus on the 20th-century African American experience through a historical lens. We will explore the traditions and culture that African Americans created to sustain their lives away from their places of origin, including the Black Press, the Black Church, the ideals of the New Negro, Black Art and Literature, and Black Fraternities and Sororities. The reading list includes Isabel Wilkerson's Pulitzer Prize-winning *The Warmth of Other Suns: The Epic Story of America's Great Migration*, and her portrayal of three southern migrants who traveled to various corners of the country. During our studies, we will gain a sense of the complex emotions and struggles (physical, financial, familial, and social) that resulted so that we can better understand the impetus for such a migration and the impact it had on, as Wilkerson states, "our cities, our country, and ourselves."

Advanced History: Modern Nigeria

H2AdvModNigeria

Winter Trimester, full credit - 1 Course Unit

Nigeria: The fictional setting of Chinua Achebe's *Things Fall Apart* and Chimamanda Ngozi Adichie's *Purple Hibiscus*; a land dominated by three distinct ethnic groups; and celebrated in film by its own powerful film industry. This course will begin with a close examination of the powerful ethnic groups that dominated the region prior to English colonization. Resistance movements during this period will be the subject of much of our study before transitioning into the independence movements that made Nigeria a free country in the Year of Africa, 1960. We also will examine the positive and negative impacts of the discovery of Nigerian oil in 1956 and how it shapes Nigeria today. We conclude with an examination of Nigeria's tenuous relationship with democratic principles as Nigeria works to establish itself as the dominant political, military, and economic force on the Continent. The course will conclude with an inquiry project focused on Nigeria in the 21st century.

Advanced History: Comparative Women's History: Latina Women

H2AdvLatWom

Winter Trimester, full credit - 1 Course Unit

New in 2024-2025

Applying an interdisciplinary approach, this course compares Latina women as global citizens in Latin America and the United States. Through this lens, we will interrogate issues of identity, power, gender, citizenship, and sexuality. We will also focus on women in the broader context of labor, migration, motherhood, family, and political activism in Latin America and the United States.

SPRING ADVANCED HISTORY ELECTIVES

In addition to the spring trimester courses below, the History Department also offers two spring interdisciplinary electives one of which students can enroll in for *either* History *or* English credit, the other of which students can enroll in for *either* History *or* Science credit . Course descriptions and registration information can be found in the "**Interdisciplinary Electives**" section of this Registration Booklet. These courses are:

Advanced History Elective: Radical California History

H3AdvRadicalCal

Advanced English Elective: Radical California History

E3AdvRadicalCal

History Elective: World War II - Science and Technology

H3WW2SciTech

Science Elective: World War II - Science and Technology

S3WW2SciTech

Advanced History: Modern Middle East

H3AdvModMidE

Spring Trimester, full credit - 1 Course Unit

This trimester elective delves into the origins of the modern Middle East and then explores key contemporary issues in a case study format. Students begin the trimester by briefly examining aspects of the rich history, culture, and religion of the region. The course then focuses on the Ottoman Empire and its dissolution after WWI, which in turn shapes the contours of the modern Middle East as it is known today. Finally, the course looks into a selection of modern case studies centered on a rotating set of countries or topics that are most relevant in any given year. This might include, for instance, the origins of modern Turkey and contemporary challenges to its democracy, the Arab-Israeli conflict, and the Islamic revolution in Iran and its role in the region today, and more. Through these studies, students come to understand the deep historical roots of the many political, economic, social, and security issues that face the modern Middle East today.

Advanced History: Modern Japan

H3AdvModJapan

Spring Trimester, full credit - 1 Course Unit

This course will investigate Japan's rapid transition from a militantly closed, homogenous, and provincial island country to a stunningly powerful industrial and military force. Students will investigate the Meiji Restoration's impact on a chain of events that positioned Japan as the preeminent military power in Asia through World War II, led to Japan's violent pursuit of a Pan-Asian empire, prompted Japan's attack on Pearl Harbor, and ended with the horror of Nagasaki and Hiroshima. Investigating both the geo-political events that have shaped Japan and the cultural norms that have remained powerfully impactful on the country, the course will conclude with a close examination of the scarred, proud, and economically powerful nation that emerged from American occupation after WWII by giving students the opportunity to use their skills to follow a line of inquiry that pulls our focus into the 21st century and establishes Japan's place in Asia and the world.

Advanced History: After Violence: Truth, Justice, and Social Repair

H3AdvAfViolence

Spring Trimester, full credit - 1 Course Unit

The starting place for this course is the aftermath of war, genocide, and ethnic conflict, with case studies drawn from the 1990s and 2000s. Although we begin by delving into the impacts of violence (prioritizing the perspectives of non-state actors, including women and children), our primary inquiry in this course is how communities heal following the upheaval of conflict and ultimately seek truth, justice, and social repair. Other themes include the politics of remembering and memorialization; women as survivors and activists; the role of international peacekeeping, criminal tribunals, and reconciliation commissions; and the ethics and challenges of democracy building. Texts in this course are college-level and drawn from across disciplines (incl. History, International Relations, Anthropology, and Sociology). Assignments include student-led deliberations, policy position papers, a self-reflection journal, and a final inquiry-based research project.

Advanced History: Gender Matters

H3AdvGenderMat

Spring Trimester, full credit - 1 Course Unit

Focused on the 1940s-2020s in the United States, we examine the historical context for core feminist and queer theories and, from these, infer the concepts, questions, and critiques that are foundational to Gender Studies. Along the way, we will identify how Gender Studies has become more inclusive of the diverse experiences of women, men, and LGBTQ+ communities. Designed as an inquiry-based course, we will rely on ‘artifacts’ -- including poetry, documentaries, ethnography, pop-culture content, news media, and literature -- to further our understanding of how gender shapes (and is shaped by) factors such as politics, class, race/ethnicity, culture, religion, age, and education, as well as assumptions around biology and sexuality. Students will be asked to deliberate on a variety of viewpoints; hone their own opinions; and conclude with in-depth research into current topics related to gender.

Advanced History: Immigration Experiences in the US

H3 AdvImmigExp

Spring Trimester, full credit - 1 Course Unit

Advanced Immigration Experiences in the US explores immigration history from the eighteenth to the twenty-first century. The class examines the forces that brought people from various parts of the globe to the U.S., their experiences in migrating and in subsequent generations, and enduring racial and ethnic hierarchies. The course will focus on particular moments of immigration throughout US history beginning with colonial settlement and moving forward to the twenty-first-century debates about immigration reform. Major themes that will be explored are nativism and racism; push and pull factors for immigration; race and the law; urbanization and industrialization; work and class; gender and family dynamics; undocumented migration or “illegal” immigration; and chain, circular, and return migration patterns. The class readings will consist of both primary and secondary sources, including memoirs, oral interviews with immigrants, and readings on immigration that discuss how gender, race, and class have factored into the immigration process and experience in the United States.

ELECTIVES IN ECONOMICS**Advanced Microeconomics**

H1AdvEconMicro

Fall Trimester, full credit - 1 Course Unit

The Advanced Microeconomics course gives students a rigorous understanding of the principles of microeconomics to aid their development of an “economic way of thinking.” Course units focus on models that teach students to analyze and predict the choices made by consumers, producers, and the government as well as to assess whether those outcomes are efficient and/or fair. Discussions will focus on economic issues such as the trade-off between equity and efficiency, the gains from specialization and trade, and the impact of government policies. Group presentations, current affairs analysis, and stock investment simulation will supplement the concepts provided by the textbook. Open to 11th and 12th grade students.

Advanced Macroeconomics

H2AdvEconMacro

Winter Trimester, full credit - 1 Course Unit

In the Advanced Macroeconomics course, students focus on the core principles of economics at the national level. The course begins with the fundamentals, including nominal and real GDP, CPI and cost of living, labor market fluctuations and employment, factors for economic growth, and fiscal policy. The course then delves into advanced topics related to monetary principles, such as the monetary system, money supply, and aggregate supply and demand. This ultimately enables students to do a deep dive into the workings of monetary policy and how the government uses it, alongside fiscal policy, in order to maintain price stability and promote economic growth at full employment. Open to 11th and 12th grade students. Prerequisite: Microeconomics

HUMAN DEVELOPMENT DEPARTMENT

Graduation Requirement: 9th Grade Seminar, 10th Grade Seminar, and 11th Grade Seminar

9th Grade Seminar

DFreshSem

Yearlong, half credit - 0.5 Course Unit

Meeting two periods weekly and required of all 9th graders, this course is designed to build a foundation in Well-Being and Service-Leadership around Orientation and Organization at Cate. In the fall, topics include time management, school expectations, extracurricular programming, personal values and independent living. The course focuses on self-awareness, responsibility and self-advocacy, including boundary training that addresses hazing, harassment, and bullying. Discussions include issues in human relationships, personal growth, and good decision-making. In the winter and spring, the course aims to disseminate clear and accurate information about sexuality, reproduction, birth control, health, communicable diseases and drug education, and to encourage respect for others regardless of gender, race, ethnicity, sexual orientation, or other differences. The approach is designed to promote positive communication skills, values clarification and effective decision-making skills. An overnight hike to Bee Camp and 9th Grade Public Service Day are highlights of the 9th Grade outdoor and service-leadership curriculum.

10th Grade Seminar

DSophSem

Yearlong, quarter credit - 0.25 Course Unit

Meeting one time each week and required of all sophomores. In the fall, the focus is on health and well-being at Cate. A Sophomore retreat will be the capstone of the fall experience. In the Winter, this course deepens the foundational SEL skills of Human Development through Service-Leadership while emphasizing Cate's- Servons motto through Service-Leadership in the Outdoors and Service-Leadership through Social Justice and DEI. Topics of study are student selected and interest driven. In the Spring, students will work with our outdoors program to develop leadership skills and work collaboratively as a group. Topics covered throughout the year include the Developing Teen Brain, the Power of Social Dynamics; Healthy Relationships and Consent, Self-Advocacy, Setting Clear Boundaries; Identity Development; Wellness, Stress, and Relaxation Techniques; Integrity in Interpersonal Relationships; Drug Education, awareness and prevention of abuse.

11th Grade Seminar

DIVisionPract

Fall Trimester, quarter credit - 0.25 Course Unit

Our 11th grade seminar takes place only during the first trimester and is centered around two units: exemplary leadership and healthy relationships. In the leadership, unit students defined their personal values and narrowed them down to their core values that drive decision making. They learned how language can affect the clarity of their vision. Collectively discussed ways to improve Cate School and will revisit these strategies at Junior retreat. The second unit centered around healthy relationships and well-being. We focus on how to identify red flags of relationships abuse and also how to seek help for yourself or others in situations of sexual assault or abusive relationships. This course includes a visit from the health center to talk about substances, and answer any health related questions or concerns.

Seminar Teaching Assistant

Dtafreshsem

Yearlong, half credit - 0.5 Course Unit

The Human Development department approach is modeled on both social and neurological development, beginning with 9th Grade Seminar then culminating with our 12th grade Teaching Assistants who give back to the school in the 9th Grade Seminar classes and on campus. TA's are asked to model the wellbeing and service-leadership behaviors – self-discipline, persistence, awareness, responsibility, and kindness, create a positive class environment by engaging enthusiastically with the students and the material, and connect with students outside of class – in order to best meet student needs and develop communication to better practice. 12th grade Teaching assistants will facilitate classes and connect with their seminars. The program begins with a two-day training retreat in the fall. Application process required.

MATHEMATICS DEPARTMENT

Graduation Requirement: One year long course per year through the 11th grade, though at least Algebra 2 or Math 3H.. Four years of math are recommended for most students.

Interdisciplinary Courses: In collaboration with the Science Department, the Math Department offers two interdisciplinary courses that may be listed as math or science courses on a student's transcript. These courses include:

Math: Introduction to Computational Thinking
Science: Introduction to Computational Thinking

MIntroComp
SIntroComp

Math: Advanced Computer Science
Science: Advanced Computer Science

MAdvCompSci
SAdvCompSci

Course descriptions and registration information can be found in the “**Interdisciplinary Electives**” section of this Registration Booklet.

Math 1

MMathPBL1

Yearlong, full credit - 1 Course Unit

Math 1 is a problem-solving course where the ultimate goal is for students to gain confidence in their ability to make sense of a problem, and once a problem is understood, to apply mathematical knowledge and tools strategically during the problem-solving process, and to persist in solving the problem. As a result of this course, students learn to express these patterns in the abstract language of algebra, and to apply properties of numbers to these algebraic expressions in order to manipulate them. Students engage with contextual problems that deepen their understanding of proportional relationships, linear and absolute value functions, inverse relationships, and shared work and mixture problems. At the heart of all these problems is the power of mathematics to model the world around us. Students are expected to be at the very center of a cooperative process, discussing, writing about, and presenting well-reasoned explanations. The course uses a variety of materials, primarily problems from the Math 1 text written by the math department at Phillips Exeter Academy and Desmos graphing technology. This course is best suited for students who have had a full year of Algebra 1 but need to deepen their mastery of this foundation material. Prerequisite: Algebra 1 or equivalent.

Math 2

MMathPBL2

Yearlong, full credit - 1 Course Unit

Math 2 is a problem-solving course where the ultimate goal is for students to gain confidence, skill and persistence in mathematical problem solving. At this level, the course provides students with a rigorous, integrated, and in-depth study of algebra processes and geometric principles. We use a variety of materials, including iPad technology, graphing software like Desmos, and problems from “Math 1” and “Math 2” written by the math department at Phillips Exeter Academy to use pattern-building in the service of eventually developing mathematical generalizations. In this course, the math topics are valuable, but equal importance is given to the style in which students take on responsibility for thinking critically, creatively, and collaboratively. This course may serve as a transition into Algebra 2 and Trigonometry or, for those who excel and find the curriculum rewarding, it can also serve as an entry point to our Honors Problem Based Learning strand. Prerequisite: an Algebra 1 course, Math 1, or the equivalent and consent of the department.

Math 2 with Vector Geometry

MMathPBL2VG

Yearlong, full credit - 1 Course Unit

Math 2 with Vector Geometry is a problem-solving course that provides students with a more rigorous, integrated, and in-depth study of algebra processes. In addition to investigating exponent rules and imaginary numbers, students are asked to transfer their understanding of algebra to topics in geometry such as lines, vectors, parabolas, and trigonometry. Through the exploration of linear motion via parametric equations, students are introduced to optimization and transformations. We use a variety of materials, including iPad technology, graphing software like Desmos, and problems from “Math 1” and “Math 2” written by the math department at Phillips Exeter Academy, which focus on pattern-building through the integration of algebra and geometry. In this course, students take on the responsibility of thinking critically, creatively, and collaboratively to solve meaningful problems on their own, learning content and making connections through the problem-solving context. This course may serve as a transition into Algebra 2 and Trigonometry or, for those who excel and find the curriculum rewarding, it can also serve as an entry point to our Honors Problem Based Learning strand. Prerequisite: Math 1 or the equivalent and consent of the department.

Algebra 2 and Trigonometry

MMathAlg2Trig

Yearlong, full credit - 1 Course Unit

Algebra 2 and Trigonometry builds a strong foundation of algebraic skills and understanding by reviewing and extending the topics from previous courses. Students work extensively with the “toolkit functions.” Linear, absolute value, quadratic, cubic, roots, rational, exponential, logarithmic, and trig functions are spiraled throughout the course, ensuring that students are able to connect their graphs, tables, and equations. Students learn to create new functions from their toolkit functions through transformations and explore how these new functions model real life situations. In all cases, the relationship between multiple representations (graphical, symbolic, numeric, and applied) is heavily emphasized. The mechanics of manipulating symbolic notation is traditionally the most challenging part of an Algebra 2 course, and we continually practice these cumulative skills throughout the year, connecting the symbolic representation of these functions to their more accessible graphical representations at every opportunity. The result is stronger algebraic, graphical, and problem-solving skills, all of which are essential to future studies in mathematics. Prerequisite: Math 2 or the equivalent.

Honors Math 3

MHonMathPBL3H

Yearlong, full credit - 1 Course Unit

Honors Math 3 is a problem-based learning course that expands on the algebra and geometry content in Math 2 with Vector Geometry to include nonlinear motion and nonlinear functions. Students investigate circular motion by using trigonometric functions, model various scenarios using exponential functions, straighten nonlinear data using logarithms, and describe geometric transformations using matrices. In preparation for the study of calculus, students are introduced to instantaneous rates of change through the exploration of slopes on nonlinear graphs. We use a variety of materials, including iPad technology and problems that focus on pattern-building through the integration of precalculus and trigonometry from the “Math 3” text written by members of the Math Department at Phillips Exeter Academy. As is the case in all our PBL courses, in this class students take on the responsibility of thinking critically, creatively, and collaboratively to solve meaningful problems on their own, learning content and making connections through the problem-solving context. Prerequisite: Math 2 with Vector Geometry and consent of the department.

Pre-Calculus: Functions

MPreCalc

Yearlong, full credit - 1 Course Unit

Pre-Calculus: Functions builds on the foundation laid in Algebra 2 and Trigonometry. Students delve more deeply into transformations, inverse functions, and composition of functions while continuing to strengthen their graphical reasoning and symbolic manipulation skills. Writing equations, solving or evaluating them, and interpreting results are emphasized as students work with problems in context. Students write equations to model physical situations (tides, population growth, projectile motion, etc) and to set up and solve optimization problems, and they continue to use Desmos in problem solving. This course provides a thorough study of functions as a preparation for calculus. Entering students should have a strong background in Algebra, usually meaning B or better in Algebra 2 and Trigonometry. Prerequisite: Algebra 2 and Trigonometry or Honors Math 3.

Advanced Calculus 1

MAdvCalc1

Yearlong, full credit - 1 Course Unit

Advanced Calculus 1 is a college-level mathematics course designed as an introduction to a variety of topics relating to integral and differential calculus including functions, graphs, limits, the conception and application of derivatives, the interpretation and application of integrals, and the fundamental theorem of calculus. The course outline focuses on the tools of calculus for problem solving. Prerequisite: Pre-Calculus: Functions and consent of the department.

Advanced Math 4

MAdvMathPBL4

Yearlong, full credit - 1 Course Unit

Advanced Math 4 begins with a foray into complex numbers, polar coordinates, recursion, functional notation, slope, velocity, asymptotes, the fundamental constant e and applications of the preceding before officially delving into differential and integral calculus. Through a carefully crafted sequence of problems, students become fluent in the conceptual and notational language of differential equations. Students also discover, explore, and apply the Fundamental Theorem of Calculus, which connects differential (rate problems) and integral (accumulation problems) calculus. Throughout the curriculum, students encounter problems in context (physics, economics, environmental studies) to emphasize the application power of calculus. They also continue to work with multiple representations of functions (graphical, numerical, symbolic) and are empowered to make strategic decisions about what tools they want to employ when solving problems. Prerequisite: Honors Math 3 and consent of department.

Advanced Calculus 2

MAdvCalc2

Yearlong, full credit - 1 Course Unit

Advanced Calculus 2 seeks to challenge our most advanced student by providing a rigorous course in college calculus with relevant applications and elegant connections. Emphasis is on problem-solving skills, preparation for college math, and using proof to understand why methods work. The course continues with the PBL approach as students learn calculus through problem solving and includes a high level of theory, proof of methods, practical applications, and connections between Algebra, Geometry, Functions, and Trigonometry. Topics include limits, derivatives, integrals, series, parametric functions, polar curves, and vectors. Students are encouraged to discover ideas and connections through challenging problems, labs, and inquiry activities. Pre-requisite: Advanced Math 4 or Advanced Calculus 1 and consent of the department.

Advanced Statistics

MAdvStat

Yearlong, full credit - 1 Course Unit

Advanced Statistics is equivalent to a college level, one-semester, introductory course in statistics. The purpose of Advanced Statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data (observing patterns and departures from patterns), planning a study (deciding what and how to measure), anticipating patterns in advance (producing models using probability and simulation), and statistical inference (confirming models). Prerequisite: Prob, Stat, Calc or PreCalculus: Functions and consent of the department. This course is not offered every year, depending on student enrollment.

Advanced Statistics, Multivariable Calculus, and Linear Algebra MAdvStatCalcAlg

Yearlong, full credit - 1 Course Unit

Advanced Statistics, Multivariable Calculus, and Linear (Math 61H) is intended for students who have completed Advanced Calculus 2 and have a strong interest in higher mathematics. The fall and winter terms of this course comprise an equivalent to a college level, one-semester, introductory course in statistics. The purpose of the Advanced Statistics section of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The spring term is designed to expose our most advanced students to areas of higher collegiate mathematics beyond Calculus and Statistics. We specifically introduce Linear Algebra and Multivariable Calculus through a series of questions and problems, emphasizing graphs, visuals, and technology. In the Linear Algebra portion, we connect matrices and vectors through applications in economics and science. The Multivariable unit includes gradient, partial derivatives, double and triple integrals with applications to Physics. We use Mathematica software to provide 3-D visuals and expose students to powerful computing tools used in college mathematics. Each student is provided a license for the term. Emphasis will also be placed on proof, a required component of theoretical mathematics. Prerequisite: Advanced Calculus 2 and consent of the department.

Probability, Statistics, and Calculus MProbStatCalc

Yearlong, full credit - 1 Course Unit

Probability, Statistics, and Calculus is an introductory statistics elective taught through real world data and applications designed for seniors who do not choose to pursue one of the advanced options. In the fall and winter trimesters, the course provides an introduction to the discrete math topics of probability and statistics, including the analysis of data, the conducting of surveys, sampling, experiments, and inference. In the spring the major themes of calculus (the limit, derivative, and integral) are introduced in a conceptual approach using applications, with extensive use of graphing tools such as Desmos or the TI-84. Prerequisite: Algebra 2 and Trigonometry

MODERN LANGUAGES DEPARTMENT

Graduation Requirement: Three sequential years of the same language, through at least level 3.

11th or 12th graders who are on track to meet or who have met the language requirement may take a placement test to gain access to a second upper level language course.

CHINESE

Chinese 1

LChinese1

Yearlong, full credit - 1 Course Unit

This level 1 course provides an in-depth introduction to Chinese. The class emphasizes the acquisition of the basic knowledge and skills required for effective communication, including grammatical principles, use of radicals, accent, intonation, and pronunciation. Reading and listening comprehension are also stressed, as are character writing skills. Students speak Chinese from the first day of class. The topics that will be covered are: Basics, Greetings, Family, Time and Date, Hobbies, Visiting Friends, Making Appointments, Studying Chinese, and School Life - Diary Entry: A Typical School Day. Cultural notes related to each topic are also shared and discussed. Placement determined by the department.

Chinese 2

LChinese2

Yearlong, full credit - 1 Course Unit

This level 2 course continues to develop the basic language skills introduced in Level 1, with a focus on interpersonal communication and authentic language used in real-life contexts. Students start writing complex sentences with a focus on word order within the sentence structure. The topics that will be covered include: School Life - Letter: Writing to a Friend, Shopping, Transportation, Weather, Dining, Asking Directions, Birthday Party, and Seeing a Doctor. Cultural notes related to each topic are also shared and discussed. Prerequisite: Chinese 1 or determined by the department.

Chinese 3

LChinese3

Yearlong, full credit - 1 Course Unit

This is an intermediate course in which students are able to refine and apply the skills acquired in the first two years. Students are required to make numerous oral presentations, read increasingly sophisticated works, and begin to write more fully developed essays. The topics that will be covered are: Dating, Renting an Apartment, Sports, Travel, At the Airport, First School Day in College, and Dorm life. This course is co-enrolled with Honors Chinese 3. All students in both courses will have access to opportunities of deeper study and practice of the language. Honors students are expected to demonstrate higher-order thinking and complexity in oral presentations and written work complexity in oral presentations and written work as well as higher rates of engagement with the target language. Prerequisite: Chinese 2. Open to 10th, 11th, and 12th graders.

Honors Chinese 3

LHonChinese3

Full year - .33 credits/trimester

This is an intermediate course in which students develop, refine, and apply the skills acquired in the first two years. Students are required to make numerous oral presentations, read increasingly sophisticated works, and begin to write more fully developed essays. Students demonstrate higher-order thinking and complexity in oral presentations and written work. Honors placement in Chinese is determined by the department. The topics that will be covered, but not limited to: Dating, Renting an Apartment, Sports, Travel, At the Airport, First School Day in College, and Dorm life. This course is co-enrolled with Chinese 3. All students in both courses will have access to deeper study and practice of the language. Honors students are expected to demonstrate more sophisticated reading, writing, and oral skills and higher rates of engagement in the target language. Prerequisite: Chinese 2 and permission of the department. Open to 10th, 11th, and 12th graders.

Chinese 4

LChinese4

Yearlong, full credit - 1 Course Unit

Students in Chinese 4: Language and Culture will further develop intermediate skills in speaking, listening, reading, and writing Chinese, as well as engage in cultural enrichment exercises. Exposure to adapted authentic text will complement the interpretive skill of spoken and written Chinese. Students will refine their abilities to speak clearly about a variety of fundamental communicative topics and social situations. Particular emphasis will be devoted to internalizing more complex grammatical constructions. The topics that will be covered, but not limited to: At a restaurant, Shopping, Choosing classes, Internet. Class activities will include research projects and presentations on current events and culture in China. This course is co-enrolled with Honors Chinese 4. All students in both courses will have access to opportunities of deeper study and practice of the language. Prerequisite: Chinese 3 or permission of the department. Open to 11th and 12th graders.

Honors Chinese 4

LHonChinese4

Full year - .33 credits/trimester

Students in Chinese 4: Language and Culture will further develop intermediate skills in speaking, listening, reading and writing Chinese, as well as engage in cultural enrichment exercises. Exposure to adapted authentic text will complement the interpretive skill of spoken and written Chinese. Students will refine their abilities to speak clearly about various fundamental communicative topics and social situations. Particular emphasis will be devoted to internalizing more complex grammatical constructions. Class activities will include research projects and presentations on current events and culture in China. This course is co-enrolled with Honors Chinese 4. All students in both courses will have access to deeper study and practice of the language. Honors students are expected to demonstrate more sophisticated reading, writing, and oral skills and higher rates of engagement in the target language. Prerequisite: Chinese 3 or permission of the department. Open to 11th and 12th graders.

Advanced Chinese: The Chinese Idiom

L1AdvChIdiom

Fall trimester, full credit - 1 Course Unit

This course is designed to immerse students in classical Chinese idioms and popular folktales. For thousands of years, idioms have played an essential role in Chinese culture and literature. They were widely used in Classical Chinese literature and are still common in contemporary Chinese writing and spoken language. The students will learn how idioms are used to communicate and express ideas, and how idioms relate to language development and cultural fluency. Prerequisites: Honors Chinese 4 and permission from the department. Open to 11th and 12th graders.

Advanced Chinese: Chinese Cinema

L2AdvChCine

Winter trimester, full credit - 1 Course Unit

Students in this course will view and analyze films that use the Chinese language that are rich in cultural, historical, and artistic significance. In addition to enhancing their knowledge of the complexity and richness of Chinese culture, students will continue to develop their language fluency and critical thinking skills. Students will also gain confidence in their comprehension as they sharpen their sensitivities to regional dialects from different regions. Prerequisites: Honors Chinese 4 and permission from the department. Open to 11th and 12th graders

Advanced Chinese: Literature

L3AdvChLit

Spring trimester, full credit - 1 Course Unit

This course is intended to give students a basic understanding of contemporary Chinese literature. Students in this course will read, analyze, and discuss authentic literary masterpieces from contemporary Chinese artists. In addition, students will learn how to critically appreciate literature that is expressed as song lyrics. Works to be covered include: contemporary novels, song lyrics, among others. Prerequisites: Honors Chinese 4 or heritage learners, and permission from the department. Open to 11th and 12th graders.

FRENCH**French 1**

LFrench1

Yearlong, full credit - 1 Course Unit

Level 1 courses provide an in-depth introduction to French. The classes emphasize the acquisition of the basic knowledge and skills required for effective communication, including grammatical principles, accent, intonation, and pronunciation. Reading and listening comprehension are also stressed, as are writing skills. Students speak French from the first day of class. We also explore the cultures and geography of the French-Speaking world. Placement is determined by the department.

French 2

LFrench2

Yearlong, full credit - 1 Course Unit

This course continues to develop the basic language skills introduced in Level 1, with considerable focus on grammar and vocabulary. Besides continued refinement of speaking and listening skills, these courses emphasize the development of concise, well-organized compositions. Students also begin to read literature in preparation for the third-year courses. We stress the importance of culture learning about the French speaking world. Prerequisite: French 1 or determined by the department.

French 3

LFrench3

Yearlong, full credit - 1 Course Unit

This is an intermediate course in which students develop, refine, and apply the skills acquired in the first two years. Students are required to make numerous oral presentations, read increasingly sophisticated works, and begin to write more fully developed essays. This course is co-enrolled with Honors French 3. All students in both courses will have access to opportunities for deeper study and practice of the language. Prerequisite: French 2. Open to 10th, 11th, 12th graders.

Honors French 3

LHonFrench3

Yearlong, full credit - 1 Course Unit

This is an intermediate course in which students develop, refine, and apply the skills acquired in the first two years. Students are required to make numerous oral presentations, read increasingly sophisticated works, and begin to write more fully developed essays. This course is co-enrolled with French 3. All students in both courses will have access to deeper study and practice of the language. Honors students are expected to demonstrate more sophisticated reading, writing, and oral skills and higher rates of engagement in the target language. Honors placement in French 3 is determined by the department. Open to 10th, 11th, 12th graders.

Advanced French: Language Studies

LAdvFrLang

Yearlong, full credit - 1 Course Unit

Students in this class will develop strong language proficiency through the study of literature, art, current events, and cinema. Students will also enrich their cultural competence of the Francophone world through a variety of media (podcasts, videos, TV5 Monde recordings, documentaries, etc.), which are used throughout the course to heighten sensitivity to and comprehension of the myriad perspectives and linguistic characteristics of French across the globe. This course will focus on integrating written and aural language skills, as well as acquiring and analyzing information from authentic sources. Students completing this course in good standing will be adequately prepared for college-level courses. Prerequisites: French 3, Honors French 3 and/or permission of the department.

Advanced French: Literature Studies

LAdvFrLit

Yearlong, full credit - 1 Course Unit

This course is designed for students who are proficient in French and have completed French 4 or above with distinction. The class is conducted entirely in French. Students will approach francophone literature analyzing each work closely using evidence from the texts to discuss, present and write about French literature. We will discuss content, style, philosophy, gender, race, class, and culture. Students will explore the historical and cultural contexts of the works explored which will include novels, plays, poems, and short stories. This course requires students to think critically, examine closely, and question actively. We will consider various perspectives, analyze the different “voices” present, and use various media to support original theories and answer questions formulated by students. Prerequisites: French 4, Advanced French Language or equivalent or permission of the department. Open to 11th and 12th graders.

JAPANESE

Japanese 1

LJapanese1

Yearlong, full credit - 1 Course Unit

Level 1 courses provide an in-depth introduction to Japanese. The classes emphasize the acquisition of the basic knowledge and skills required for effective communication, including grammatical principles, accent, intonation, and pronunciation. Reading and listening comprehension are also stressed, as are writing skills. Students will learn the two syllabic writing systems, hiragana and katakana, and begin studying kanji. Students in this beginning level learn to tell about themselves and their environment, as well as ask about others'. Although this is a class for those with little or no Japanese language learning background, students speak Japanese from the first day of class. Placement is determined by the department.

Japanese 2

LJapanese2

Yearlong, full credit - 1 Course Unit

This course continues to develop the basic language skills introduced in Level 1, with considerable focus on grammar and vocabulary. Students at this level develop language skills relating to daily tasks and interactions with others. In addition to continued refinement of speaking and listening skills, this course emphasizes the development of concise, well-organized compositions. Prerequisite: Japanese 1 or determined by the department.

Japanese 3

LJapanese3

Yearlong, full credit - 1 Course Unit

This is an intermediate course in which students are able to refine and apply the skills acquired in the first two years. In this intermediate level, students begin to learn advanced conjugations and apply them in authentic contexts. The setting for all communicative activities is Japan. Students are required to make numerous oral presentations, read increasingly sophisticated works including literary excerpts, and begin to write more fully developed essays. This course is co-enrolled with Honors Japanese 3. All students in both courses will have access to deeper study and practice of the language. Prerequisite: Japanese 2. Open to 10th, 11th, and 12th graders.

Honors Japanese 3

LHonJapanese3

Yearlong, full credit - 1 Course Unit

This is an intermediate course in which students are able to refine and apply the skills acquired in the first two years. In this intermediate level, students begin to learn advanced conjugations and apply them in authentic contexts. The setting for all communicative activities is Japan. Students are required to make numerous oral presentations, read increasingly sophisticated works including literary excerpts, and begin to write more fully developed essays. This course is co-enrolled with Japanese 3. All students in both courses will have access to deeper study and practice of the language. Honors students are expected to demonstrate more sophisticated reading, writing, and oral skills and higher rates of engagement in the target language. Prerequisite: Japanese 2. Open to 10th, 11th, and 12th graders.

Japanese 4

LJapanese4

Yearlong, full credit - 1 Course Unit

Students in Japanese 4: The Japanese Soul will continue to develop intermediate language skills and cultural sensitivities through close examination of the Japanese soul. From the immigration experience during the early Meiji Era through internment and the atomic bombings of World War II, students will delve into the Japanese value system and its impact on behavior, perspective, and language elements (keigo, kotobazukai, etc.). Students will also explore origins, contexts and applications of these values as they connect the teachings of 16th century tea master Sen no Rikyu to 20th century poet and philosopher Kenji Miyazawa, haiku verse and modern environmental policy. This course is co-enrolled with Honors Japanese 4. All students in both courses will have access to deeper study and practice of the language. Prerequisite: Japanese 3 or permission of the department. Open to 11th and 12th graders.

Honors Japanese 4

LHonJapanese4

Yearlong, full credit - 1 Course Unit

Students in Japanese 4: The Japanese Soul will continue to develop intermediatedevelop advanced language skills and cultural sensitivities through close examination of the Japanese soul. From the immigration experience during the early Meiji Era through internment and the atomic bombings of World War II, students will delve into the Japanese value system and its impact on behavior, perspective, and language elements (keigo, kotobazukai, etc.). Students will also explore origins, contexts and applications of these values as they connect the teachings of 16th century tea master Sen no Rikyu to 20th century poet and philosopher Kenji Miyazawa, haiku verse and modern environmental policy. This course is co-enrolled with Japanese 4. All students in both courses will have access to deeper study and practice of the language. Honors students are expected to demonstrate more sophisticated reading, writing, and oral skills and higher rates of engagement in the target language. Prerequisite: Japanese 3 or permission of the department. Open to 11th and 12th graders

SPANISH

Spanish 1

LSpanish1

Yearlong, full credit - 1 Course Unit

Level 1 courses provide an in-depth introduction to Spanish. The classes emphasize the acquisition of the basic knowledge and skills required for effective communication, including grammatical principles, accent, intonation, and pronunciation. Reading and listening comprehension are also stressed, as are basic writing skills. Students use Spanish from the first day of class. Placement is determined by the department.

Spanish 2

LSpanish2

Yearlong, full credit - 1 Course Unit

This course continues to develop the basic language skills introduced in Level 1, with considerable focus on grammar and vocabulary. Besides continued refinement of speaking and listening skills, students will begin to engage with authentic cultural texts in Spanish in preparation for the third-year courses. Prerequisite: Spanish 1.

Honors Spanish 2

LHonSpan2

Yearlong, full credit - 1 Course Unit

This course continues to develop the basic language skills introduced in Level 1, with considerable focus on grammar and vocabulary. Besides continued refinement of speaking and listening skills, this course emphasizes the development of concise, well-organized compositions. Spanish students also begin to read literature in preparation for the third-year courses. Honors placement in Spanish is determined by the department.

Spanish 3

LSpanish3

Yearlong, full credit - 1 Course Unit

Spanish 3 is an intermediate course in which students further deepen their understanding of Spanish by applying and refining skills acquired during the first two levels. Students will be engaged in numerous oral presentations, read literary works, and begin to produce more fully developed essays. The course is conducted almost entirely in Spanish. Prerequisite: Spanish 2. Open to 10th, 11th, and 12th graders.

Honors Spanish 3

LHonSpan3

Yearlong, full credit - 1 Course Unit

This is an intermediate course in which students develop, refine, and apply the skills acquired in the first two years. Students are required to make numerous oral presentations, read increasingly sophisticated works, and begin to write more fully developed essays. Honors placement in Spanish is determined by the department. Open to 10th, 11th, and 12th graders.

Spanish 4

LSpanish4

Yearlong, full credit - 1 Course Unit

Spanish 4: History and Culture is for students who have successfully completed Spanish 3 and who wish to continue their study of Spanish. The course develops the four skills (reading, writing, speaking, and listening), with particular emphasis on oral communication and cultural competency, promotes student-centered and contextual learning as well as critical thinking skills, and develops reading as a basis for general discussions rather than for close literary analysis. The cultural component consists of a general study of the Spanish-speaking world. Short readings, music, and videos are part of this component, as are projects on art history, geography, and other historical, economic, and cultural topics, including a yearlong project on a topic of students' choosing. Students will be expected to achieve a general understanding of some of the current issues facing the Spanish-speaking world. This course is taught entirely in Spanish. Prerequisite: Spanish 3, Honors Spanish 3, or permission of the department. Open to 11th and 12th graders.

Advanced Spanish: Language Studies

LAdvSpLang

Yearlong, full credit - 1 Course Unit

Through the study of literature, history, art and current events, students will develop a strong command of the Spanish language and expand their cultural understanding. A variety of media and materials (such as articles, literature pieces, literary and cultural blogs, videos, documentaries, online news and podcasts, among others) will serve as a platform for students' exploration of the Hispanic language and cultures. This course will focus on student development of proficiency in integrating language skills, synthesizing written and aural material, acquiring and analyzing information from authentic sources in Spanish, being able to comprehend different dialects and accents of the Spanish-speaking world, and communicating confidently. Prerequisites: Honors Spanish 3, Spanish 4 or equivalent and permission of the department. Open to 11th and 12th graders.

Advanced Spanish: Literature Studies

LAdvSpLit

Yearlong, full credit - 1 Course Unit

This course is designed for students who are proficient in the Spanish language and have completed Spanish 3 Honors with distinction. Students will embark on a literary adventure by reading Spanish works from the 14th to the 21st Century. In addition to examining and discussing content and stylistic elements, students will explore the historical background of plays, short stories, novels and poetry. This course requires students to engage in deep analytical thinking and writing while deepening their knowledge of the cultural values, traditions, achievements, and history of the Spanish-speaking world. Prerequisites: Honors Spanish 3, Spanish 4, Advanced Spanish Language, or equivalent or permission of the department. Open to 11th and 12th graders.

Post-Advanced Spanish: Magical Realism

L1PASpMagicReal

Fall Trimester, full credit - 1 Course Unit

This course explores Magical Realism and The Fantastic depicted in Hispanic narrative, film, and art. Dating to the early twentieth century, the magical realism genre weaves magical elements into otherwise realistic human situations. Students will examine works from representative authors and artists, such as Cortázar, Dalí, García Márquez, Kahlo, Allende, Borges, Bioy Casares, and Esquivel. Students also view films such as *El laberinto del fauno*, *Como agua para chocolate* and *Volver*. Prerequisites: Advanced Spanish Language or Advanced Spanish Literature or permission of the department. Open to 11th and 12th graders.

Post-Advanced Spanish: *One Hundred Years of Solitude*

L2PASp100YrsSol

Winter Trimester, full credit - 1 Course Unit

Students in this intensive course will study in depth Gabriel García Márquez's outstanding literary work *One Hundred Years of Solitude*. Independent research, documentaries, interviews, and supplementary readings will provide students with the historical and socio-cultural background necessary to understand the culture and context in which the novel was written. Prerequisites: Advanced Spanish Language or Advanced Spanish Literature or permission of the department.

Post-Advanced Spanish: Hispanic Film

L3PASpHispFilm

Students in this intensive course will analyze films from a variety of Spanish-speaking countries that are rich in cultural, historical, and artistic significance. In addition to enhancing their knowledge of the complexity and richness of Hispanic cultures, students will continue to hone critical interpretation, analysis and comparison skills. They will continue to develop sophistication and confidence in their speaking and writing as they sharpen their sensitivities to the spectrum of accents, customs, and linguistic nuance of Hispanic cultures. Prerequisites: Advanced Spanish Language or Advanced Spanish Literature or permission of the department.

SCIENCE DEPARTMENT

“Science is built up with facts, as a house is with stones. But a collection of facts is no more a science than a heap of stones is a house.”

--Henri Poincaré (1854-1912)

Graduation Requirement: Three years of laboratory science are required; Physics in the ninth grade, Chemistry in the tenth grade and Biology in the 11th grade, or in the 12th grade with approval. Juniors who qualify and place in Advanced Chemistry may either take Honors Biology in their senior year or request to complete a preapproved (in-person, lab-based, equivalent) course during the summer. These eligible and pre-approved juniors must take Advanced Biology and math courses in their senior year at Cate. Note that coursework completed over the summer does not appear on the Cate transcript, does not affect the Cate GPA, and does not fulfill the graduation requirement.

Cate's science curriculum is predicated on the belief that every student, whether an aspiring poet, historian, doctor, or engineer, can do science and should graduate as a scientifically literate citizen. They should understand the nature of science, have the attitude and skills necessary to engage in scientific inquiry, know core ideas in physics, chemistry, biology, and be able to connect concepts that cut across these disciplines. Each student is expected to nurture their curiosity, appreciate the beauty and wonder of science, possess sufficient knowledge to communicate and engage in informed public discussion of science, be careful consumers of relevant scientific and technological information, and be able to pursue higher levels of science. Cate's Physics First program is intentionally designed to build coherence through each discipline, strengthen science and engineering practices at each grade level, and develop a foundation of scientific literacy upon which to base advanced study in the sciences. With a coordinated curriculum, effective instruction, and capable, compassionate, and determined students, the Science Department seeks to achieve these goals by placing great emphasis on inquiry to ensure that each Cate graduate is an informed, critically thinking, and scientifically literate citizen.

Physics

SPhysics

Yearlong, full credit - 1 Course Unit

Physics introduces all Cate ninth-grade students to scientific inquiry and problem-solving. After framing science as a "way of knowing," students explore fundamental mechanics topics of kinematics, projectile motion, statics, dynamics, momentum, and energy along with wave phenomena of light and sound. Students focus on exercising scientific practices: asking scientific questions and defining problems, planning and carrying out investigations, developing and using models, analyzing and interpreting data, using mathematics and computational thinking, arguing from evidence, and communicating in both verbal and written forms. Students are expected to extract the majority of their learning from these experiences and from each other with teachers serving as guides and coaches. With these scientific and metacognitive tools, Cate ninth-grade students leave the course with a firm conceptual understanding of physics and the nature of science in preparation for Chemistry and Biology at Cate. Instructional methods follow a guided-inquiry approach where students are expected to do science -- collaboratively explore phenomena, seek answers and solutions, find patterns, and develop and use models to predict the future. Required for all ninth-grade students at Cate.

Honors Physics: Electricity and Magnetism

SHonPhysEM

Yearlong, full credit - 1 Course Unit

Honors Physics is an upper school algebra-based, introductory physics course that is well suited either as a follow up to the 9th-grade Physics course in mechanics or as a first experience with physics for 11th and 12th graders with other scientific backgrounds. This class is laboratory-based; students develop their scientific inquiry skills and their understandings through collaborative hands-on investigation and argumentation. Topics of focus include electricity, magnetism, fields and potential, fluid dynamics, thermodynamics, electric circuits, optics, and modern physics. Students in upper school science classes are expected to operate with a high degree of independence and collaborate effectively with classmates. Open to juniors and seniors who have completed biology and chemistry. Prerequisites: completion of lab-based high school biology and chemistry or departmental permission. Classic mechanics coursework useful but not required. Algebra 2 and Trigonometry or higher.

Advanced Physics

SAdvPhy

Yearlong, full credit - 1 Course Unit

This year-long course is modeled after introductory, calculus-based physics courses at the college level. The course explores kinematics, dynamics, projectile motion, energy, momentum, rotation, gravitation, and oscillation with particular attention to the calculus basis for these topics. Class time is devoted primarily to physical experiments both as learning activities and as a form of assessment. Experiments are supplemented with both mathematical and computational modeling. Students must operate independently, consistently complete work, arrive prepared for class, effectively contribute, and collaborate well with classmates. Open to seniors who have completed three years of laboratory-based high school science (physics, chemistry, and biology) and demonstrated high achievement and interest in science coursework. Prerequisite: Physics and Calculus (Math 50 / PBL 4 or equivalent) and departmental permission.

Chemistry

SChemistry

Yearlong, full credit - 1 Course Unit

Chemistry is an introductory lab-based course is designed to foster inquiry and an exploration of the macroscopic and molecular-level characteristics of matter and how it changes. Students refine their ability to develop and answer scientific questions, develop and use models, plan and conduct investigations, analyze and interpret data, use mathematics and computational thinking, formulate scientific explanations, engage in argument from evidence, and communicate scientific ideas. Through lab investigation and analysis of real-world data, students construct an understanding of the structure and arrangement of atoms, ions, or molecules and the forces between them. Topics explored include atomic theory, chemical bonding, intermolecular forces, the mole concept, gases and pressure, stoichiometry, thermochemistry, and kinetics. Chemistry is co-enrolled with Honors Chemistry. All students in both courses will be exposed and have access to greater depth and exploration of topics and higher-level problem-solving. Open to sophomores.

Honors Chemistry

SHonChem

Yearlong, full credit - 1 Course Unit

Honors Chemistry is a rigorous introductory lab-based course designed to foster inquiry and an exploration of the macroscopic and molecular-level characteristics of matter and how it changes. Highly skilled, independent, and motivated learners will refine their ability to develop and answer scientific questions, develop and use models, plan and conduct investigations, analyze and interpret data, use mathematics and computational thinking, formulate scientific explanations, engage in argument from evidence, and communicate scientific ideas. Through lab investigation and analysis of real-world data, students construct an understanding of the structure and arrangement of atoms, ions, or molecules and the forces between them. Topics explored include atomic theory, chemical bonding, intermolecular forces, the mole concept, gases and pressure, stoichiometry, thermochemistry, and kinetics. While co-enrolled, Honors Chemistry goes into greater depth and exploration of modern atomic theory, thermochemistry, electrochemistry, and the discipline's quantitative applications. Honors students are expected to operate with a high degree of independence and collaborate effectively with their classmates. Open to sophomores placed in an Algebra 2 and Trigonometry course or higher. Prerequisites: High achievement in Physics and departmental permission. Co-Requisite: Algebra 2 and Trigonometry or higher.

Advanced Chemistry

SAdvChem

Yearlong, full credit - 1 Course Unit

This second-year, lab-based course is equivalent to a first-year college chemistry course. Using a guided-inquiry method, students explore nuclear chemistry, atomic and molecular structure, thermochemistry, states of matter, kinetics, equilibrium, oxidation and reduction, and thermodynamics in-depth. Students refine their ability to develop and answer scientific questions, develop and use models, plan and conduct investigations, analyze and interpret data, use mathematics and computational thinking, formulate scientific explanations, engage in argument from evidence, and communicate scientific ideas. The course has an extensive laboratory component, with many of the labs requiring students to lead the design of the investigation and methodology. Due to the rigor and pace of this course, there is an extended laboratory commitment one period each week. Students are expected to operate with a high degree of independence and collaborate effectively with their classmates. Open to juniors and seniors who have completed three years of laboratory-based high school science (physics, chemistry, and biology) and demonstrated high achievement and interest in science coursework. Note: Juniors who qualify and place in Advanced Chemistry may either take Honors Biology in their senior year or request to complete a preapproved (in-person, lab-based, equivalent) course during the summer. Eligible students must take advanced biology and math courses in the senior year. Prerequisites: high achievement in Physics, Chemistry, and departmental permission. Co-Requisite: Pre-Calculus: Functions or higher.

Biology

SBiology

Yearlong, full credit - 1 Course Unit

Biology is a first-year, laboratory-based introductory life science course that continues the development of scientific inquiry practices, furthers their mastery of science's crosscutting concepts, and builds understanding of life science's core ideas. The course explores five core areas of life science: 1) Structure and Function, 2) Inheritance and Variation of Traits, 3) Matter and Energy in Organisms and Ecosystems, 4) Interdependent Relationships in Ecosystems, and 5) Natural Selection and Evolution. Students engage in inquiry through the scientific practices, by generating questions, developing and using models, planning and carrying out investigations, analyzing and interpreting data, using mathematics and computational thinking, constructing explanations, engaging in argument from evidence, and obtaining, evaluating, and communicating information. Open to juniors and seniors. Prerequisite: Chemistry.

Honors Biology

SHonBiology

Yearlong, full credit - 1 Course Unit

Honors Biology is challenging and demanding first-year biology course designed to foster scientific thinking at a high level and addresses the core topics of ecology, cell biology, genetics, and evolution while placing a particular emphasis on biological systems at the molecular level. Resilient, motivated and strong independent learners will observe natural phenomenon, analyze patterns, and create models to describe biological systems from the cellular to the population level. In laboratory investigations, students follow an inquiry process that helps them develop their scientific skills from experimental design to interpreting data to evidence-based argumentation. Students are expected to be open to growth, operate with a high degree of independence, and collaborate effectively with their classmates. Open to juniors and seniors who have demonstrated high achievement and interest in science coursework. Prerequisite: high achievement in chemistry and departmental permission.

TRIMESTER ELECTIVES IN ADVANCED BIOLOGY

In addition to the trimester elective courses below, the Science Department also offers multiple interdisciplinary electives which students can enroll in for Science *or* English credit, Science *or* History credit, and Science *or* Math credit. Course descriptions and registration information can be found in the “**Interdisciplinary Electives**” section near the end of this Registration Booklet. These courses are:

Science Elective: American Wilderness	S23AmWilderness
English Elective: American Wilderness	E23AmWilderness
Science Elective: World War II - Science and Technology	S3WW2SciTech
History Elective: World War II - Science and Technology	H3WW2SciTech
Science: Introduction to Computational Thinking	SIntroComp
Math: Introduction to Computational Thinking	MIntroComp
Science: Advanced Computer Science	SAdvCompSci
Math: Advanced Computer Science	MAdvCompSci

Three terms of Advanced Biology are recommended, two terms in the fall and winter terms are required. Placement is at the discretion of the Science Department.

Advanced Biology: Neurobiology

S1AdvBioNeuro

Fall Trimester, full credit - 1 Course Unit

Neurobiology is a rigorous second year, college-level biology course with additional lab requirements exploring central and peripheral nervous systems. Students – starting at the organismal level with nervous system anatomy and extending down to the molecular level with neurotransmitters – will examine how neurons coordinate and control movement and lead to learning, memory, and emotion. Students will learn about the structure and function of the neuron, focusing specifically on its electrical properties of the action potential. Students will perform laboratory inquiries using simulations, live organisms, and preserved specimens (mammalian brains). The class is modeled after introductory college-level neurobiology courses for science majors, so students will learn how to read primary scientific literature and expect to be challenged and demonstrate independence in their pursuit of new learning. Open to juniors and seniors who have completed three years of laboratory-based high school science (physics, chemistry, and biology) and demonstrated high achievement and interest in science coursework. Prerequisite: high achievement in Chemistry and Biology and departmental permission. Co-Requisite: Algebra 2 and Trigonometry or higher.

Advanced Biology: Climate and Biology

S1AdvBioClimBio

Fall Trimester, full credit - 1 Course Unit

Climate Biology is a rigorous second year, college-level biology course, with additional field and lab requirements, that explores climate change and its impacts on biological communities, feedback from the biosphere to the climate system and human impacts on the carbon cycle. This course advances student's understanding of system science, with a college-level exploration of climate, placing an emphasis on interpreting the current climate change data in a historical context and defining natural and human causes of climate variability. The course also allows students to explain expected changes in the net primary production of ecosystems through the analysis of different effects of climate change on plant physiology and decomposition. Heavy emphasis will be placed on developing hypotheses on how different species and entire communities react to the changing climate by formulating a scientific question that will be applied to the design and presentation of a poster. This is a rigorous second year, college-level laboratory biology course, with a focus on the scientific practices and crosscutting concepts. Limited space available; students will be required to prioritize course requests during registration. Open to juniors and seniors who have completed three years of laboratory-based high school science (physics, chemistry, and biology) and demonstrated high achievement and interest in science coursework. Prerequisite: high achievement in Chemistry and Biology and departmental permission. Co-Requisite: Algebra 2 and Trigonometry or higher.

Advanced Biology: Human Transmission Genetics

S1AdvBioTransGe

Fall Trimester, full credit - 1 Course Unit

Human Transmission Genetics is a rigorous second year, college-level biology course that examines the details by which genetic information is transferred from one generation of humans to the next and how that information is transformed into the physical expression of traits. Advanced studies will include the ability to distinguish more subtle patterns of inheritance, such as sex-linked traits, incomplete and codominance, multiple alleles and linked genes, as well as types and effects of different gene and chromosomal mutations. Through an evolutionary lens, the course will conclude with an examination of complex multifactorial traits and the interaction between human genes and the environment. Students will discuss and debate the ethical issues raised by their studies in stem cells, reproductive technology, and eugenics. Due to the rigor and pace of this course, there is an additional required time commitment. Limited space available; students will be required to prioritize course requests during registration. Open to juniors and seniors who have completed three years of laboratory-based high school science (physics, chemistry, and biology) and demonstrated high achievement and interest in science coursework. Prerequisite: high achievement in Chemistry and Biology and departmental permission. Co-Requisite: Algebra 2 and Trigonometry or higher.

Advanced Biology: Molecular Genetics

S2AdvBioMolGene

Winter Trimester, full credit - 1 Course Unit

Molecular Genetics is a rigorous second year, college-level biology course of study that examines the biochemistry of the gene and the applications of current biotechnology. Students will begin with evolution and the foundations of the molecular structure of DNA, and the mechanics of DNA replication, protein synthesis, and gene expression. Subsequently, the more complex topics of gene regulation, non-coding DNA, RNA interference, and epigenetics will be explored. Students will become proficient with current biotechnological skills and techniques involving DNA extraction, gel electrophoresis, the polymerase chain reaction, DNA sequencing, and genetic engineering.

Throughout the course, students will consider and discuss the ethical dilemmas associated with the development of these revolutionary ideas and techniques. Due to the rigor and pace of this course, there is an additional required time commitment. Limited space available; students will be required to prioritize course requests during registration. Open to juniors and seniors who have completed three years of laboratory-based high school science (physics, chemistry, and biology) and demonstrated high achievement and interest in science coursework. Seniors who have completed Advanced Biology: Human Transmission Genetics will be given preference. Prerequisite: Advanced Biology in the fall trimester.

Advanced Biology: Coastal and Marine Ecology

S2AdvBioMarEco

Winter Trimester, full credit - 1 Course Unit

Coastal and Marine Ecology is a rigorous second year, college-level biology course, with additional field and lab requirements, that examines a wide variety of marine ecosystems, from the nearby intertidal and kelp forest systems to distant reefs and deep ocean ecosystems. Focusing on local coastal ecology, students will gain an appreciation for biodiversity and sustainability of marine ecosystems through field inquiry practices as well as classroom studies. With an emphasis on how abiotic factors impact ecological relationships and resilience, students will consider human impacts throughout the course. Students will begin to read primary scientific literature, compose annotated bibliographies, and communicate their findings in the form of scientific papers or presentations. Due to the rigor and pace of this course, there is an additional required time commitment which may include fieldwork. Limited space available; students will be required to prioritize course requests during registration. Open to juniors and seniors who have completed three years of laboratory-based high school science (physics, chemistry, and biology) and demonstrated high achievement and interest in science coursework. Prerequisite: Advanced Biology in the fall trimester.

Advanced Biology: Vertebrate Embryology

S2AdvBioEmb

Winter Trimester, full credit - 1 Course Unit

Vertebrate Embryology is a rigorous second year, college-level biology course, with additional lab requirements highlighting examples of developmental processes in several animal model systems. The goal of this course is to guide students through the study of vertebrate embryonic development from gametogenesis and fertilization to early organogenesis through inquiry, analysis, and experimentation. Students will apply concepts from the Claim-Evidence-Reasoning model in order to demonstrate understanding as to how specialized cells form from undifferentiated precursors with emphasis being placed upon mechanisms of control and integration of function. The class will explore the fundamental embryological concepts of proliferation, regulation, regeneration, cleavage, blastulation and gastrulation. Finally, students will discuss the role of the changing environment and exposure to teratogens on the development of the embryo. Laboratory exercises include experiments with living sea urchins, and nematodes as well as microscopic examination of various sections of embryos from frogs and chicks with schematics from *D. melanogaster*. Open to juniors and seniors who have completed three years of laboratory-based high school science (physics, chemistry, and biology) and demonstrated high achievement and interest in science coursework. Prerequisite: Advanced Biology in the fall trimester.

Advanced Biology: Marine Evolutionary Biology

S3AdvBioMarEvo

Spring Trimester, full credit - 1 Course Unit

Marine Evolutionary Biology is a rigorous second year, college-level biology course, with additional field and lab requirements, that examines marine species in light of evolution. Focusing on marine organisms and their adaptations to life in the sea, students will investigate the physiology, behavior and biodiversity of species found in the Ocean. Students will use computational methods to investigate evolutionary relationships between species and construct phylogenetic trees using molecular and morphological evidence. Due to the rigor and pace of this course, there is an additional required time commitment which may include fieldwork, reading primary literature, dissections for comparative anatomy and independent research. Students are expected to embrace challenge, operate with a high degree of independence and a collaborative mindset. Limited space available; students will be required to prioritize course requests during registration. Open to juniors and seniors who have completed three years of laboratory-based high school science (physics, chemistry, and biology) and demonstrated high achievement and interest in science coursework. Prerequisite: Advanced Biology in the fall and winter trimesters.

TRIMESTER ELECTIVES IN MARINE SCIENCE

Marine Science: Physical Oceanography

S1Oceanog

Fall Trimester, full credit - 1 Course Unit

The world ocean is the defining feature of our planet and makes it habitable. This senior elective examines the major physical and chemical properties of the ocean and the essential understandings needed to understand this dynamic system. Students will explore the physical properties of our one big, largely unexplored, ocean that shape many of the Earth's features. Beginning with early explorers and their understanding of our planet and the important concepts in earth structure and plate tectonics, students will investigate the influence of weather, climate, and atmospheric circulation, in addition to the ocean floor, structure, and circulation, on Earth. Students will make use of big data, satellite images, and other graphical imagery, in addition to laboratory experimentation, to understand and analyze the interaction of the hydrosphere with the atmosphere, lithosphere, and ultimately the biosphere, to deeply understand, analyze, and solve problems associated with the ocean. Open to seniors. Prerequisites: Chemistry and Biology.

Marine Science: California Coast

S2CalCoast

Winter Trimester, full credit - 1 Course Unit

This senior elective explores the scientific story of the Southern California coast: the story of its beaches, islands, waves, faults, and other natural phenomena. Through the topics of surf, sand, and stone, this course examines the coastal boundary of unrelenting geological and oceanographic processes that have shaped California's coast and created its unique surf spots, beaches, islands, and coastal ecology. Ideally an outdoor science course, students will explore Cate's coastal classroom. The big ideas of the course will make the most sense when learning is transferred from the classroom to the beaches, the bluffs, the islands, the mountains, and the salt marsh. The course values the adventure and fun of scientifically investigating intriguing and beautiful places on our coast. If sand grains are caught between our toes and falling from the binding of our books with saltwater-stained pages, then we will know that we are doing it right! Open to seniors. Prerequisites: Chemistry and Biology.

TRIMESTER ELECTIVES IN ANATOMY AND PHYSIOLOGY

Anatomy and Physiology: Sports Medicine 1

S1SpMed1

Fall Trimester, full credit - 1 Course Unit

This course will serve as a basic introduction to the fields of human anatomy and physiology. Exploration into body systems and their interactive nature will lead to a greater understanding of the overall function of the human organism. Laboratory study will include experiential learning opportunities in the fields of athletic training, exercise physiology, physical therapy, emergency management and orthopedic medicine. Through a variety of hands-on activities and laboratory inquiries, students will be exposed to the basic skills and concepts relating to the prevention, recognition, and management of athletic injury, as well as the collaborative health care approach utilized by sports medicine professionals. Students will increase their knowledge and awareness of human anatomy and physiology, pathology, and histology in addition to basic first aid and emergency management procedures (American Red Cross CPR/AED and First Aid Certification). Opportunities for specialized practical experience with the Athletic Trainer and Cate School team physicians will also be available. Open to juniors and seniors. Prerequisite: Chemistry, co-requisite: Biology.

Anatomy and Physiology: Sports Medicine 2

S2SpMed2

Winter Trimester, full credit - 1 Course Unit

Anatomy and Physiology: Sports Medicine 2 will allow students the opportunity to increase the depth of their knowledge and understanding of several body systems. Students will embark on research and laboratory study relating primarily to the cardiac and nervous systems. This course will also provide independent enrichment through a series of self-directed inquiry-based projects which may include scientific research, journal reviews, oral presentations, and debate. Laboratory study will include units in nutrition, neuroscience, psychology, and general fitness. Opportunities for specialized practical experience with the Athletic Trainer and Cate School team physicians will also be available. Prerequisite: Anatomy and Physiology: Sports Medicine 1

OTHER SPRING-TRIMESTER ELECTIVES**Animal Behaviors**

S3BioAniBeha

Spring Trimester, full credit - 1 Course Unit

Animal Behaviors is a biology course with additional lab and field requirements that examines the terrestrial species found around the Mesa and beyond. Students will conduct behavioral analysis of local animals through tracking, collecting sound recordings, and using camera traps to determine the evolutionary and mechanistic causes of characteristic behaviors in given species. Students will design, conduct, and report an observational or experimental behavioral study on an organism of their choice. Students will incorporate the results of these surveys into ongoing research of the species inhabiting Carpinteria's coastal plains and mountains. Additional time commitments may include fieldwork, dissections, and independent study. Students are expected to embrace challenge, operate with a high degree of independence, and have a collaborative mindset. Limited space available; students will be required to prioritize course requests during registration. Open to seniors. Prerequisites: Chemistry and Biology.

Science for Life: Debunking Misinformation in a Digital World

S3SciLife

Spring Trimester, full credit - 1 Course Unit

"The Earth is flat, Bigfoot real, Climate Change a hoax, and vaccination a ruse." Do not be fooled! No longer fall victim to lies and tricks; instead, seek truth by practicing skepticism and recognizing the techniques of frauds and quacks. Science for Life focuses on understanding the nature of science and its methods well enough to develop the skills needed to recognize bunk and misinformation in a world full of charlatans and pseudoscience. Students will learn how to identify and apply scientific evidence, concepts, and theories to distinguish science from non-science, bad science, and thaumaturgy by analyzing various claims and case studies. Building upon three years of science at Cate, this course will hone a senior's science literacy and critical thinking skills and inoculate them from scientific misinformation using other skills, including logic and data reasoning. These skills are arguably among the most useful and broadly applicable of those any rising college student or citizen may acquire. Open to seniors. Prerequisites: Chemistry and Biology.

INTERDISCIPLINARY ELECTIVES

Registration for the interdisciplinary electives offered by the **English and History** departments takes place during the prior spring. Seniors may take these interdisciplinary electives to fulfill the winter and spring English 12 graduation requirement or as a history credit if they are fulfilling the English requirement with another course. Juniors may only take these courses as a history credit.

Registration for the interdisciplinary electives offered by the **English and Science** departments takes place during the prior spring. Seniors may take these interdisciplinary electives to fulfill the winter and spring English 12 graduation requirement or as a science credit if they are fulfilling the English requirement with another course.

Registration for the interdisciplinary electives offered by the **History and Science** and the **Math and Science** departments takes place during the prior spring. Seniors should work with advisors and college counseling to determine whether to register for the courses as a history or science or math course.

English Elective: American Wilderness

E23AmWilderness

Science Elective: American Wilderness

S23AmWilderness

Two Trimesters (Winter and Spring), full credit - 1 Course Unit

The Wilderness Ethos is the first trimester of this two-trimester course. Students will examine the role of wilderness in American culture – historically and currently – using the writings of authors such as Thoreau, Abbey, Stegner, Leopold, and McPhee to develop a personal understanding of the value of wilderness in their own lives. While developing their critical reading and writing skills, students will examine current environmental and political implications of our impact on the American wilderness and, through the use of a journal, work actively to articulate their own developing perceptions about the role of wilderness in American culture. In the winter trimester, there will be an overnight solo backpacking trip, and students will begin to learn the skills of whitewater kayaking in preparation for the river trips of the spring trimester.

Looking Inward is the second trimester of this two-trimester course. The classroom component of this course shifts from analytical reading, critical writing, and argumentation in the winter term to personal introspection and creative writing with a study of the novel *The River Why*. Students will explore how the American wilderness has shaped various spiritual paradigms found in American society and use class discussions and journal writing to develop their own sense of their place in the natural world. In the spring trimester, students will continue to develop their kayaking skills locally and will spend a weekend on the Kern River applying their whitewater skills to moving water. Prior to Commencement, the course culminates in a week-long desert wilderness river trip in Utah.

History Elective: World War II - Science and Technology H3WW2SciTech
Science Elective: World War II - Science and Technology S3WW2SciTech

Spring Trimester, full credit - 1 Course Unit

This course will explore the role of scientific, mathematical and technological advances from German rearmament to the dropping of Little Man and Fat Boy. Several fundamental issues will be considered in the relationship between warfare and technology. For example: What is the role of science, and scientists, in war? What technological weapons are morally acceptable and what are not? Under what circumstances is it morally acceptable to bomb civilians during a war? This course seeks to provide a context for students to evaluate and analyze such questions, and, ultimately, to synthesize personal responses to them during our own era of rapid technological advancement. Lastly, students will also undertake several labs, including an aspirin experiment and building a rocket.

Advanced History Elective: Radical California History H3AdvRadicalCal

Advanced English Elective: Radical California History E3AdvRadicalCal

Spring Trimester, full credit - 1 Course Unit

With a brutal history where almost every immigrant group has experienced harsh discrimination, California is now known as one of the most liberal states in the nation. How and why did California evolve? Who were the figures who influenced these changes and what tools and tactics did they use to make change? We will explore themes where civil liberties advanced, starting with immigration, and moving on to workers' rights, environmental justice, women's rights, LGBTQ+ rights, and new-age religions. In addition, we will consider other influences on the evolution of the state such as Hollywood, technology, and the university system.

Math: Introduction to Computational Thinking MIntroComp

Science: Introduction to Computational Thinking SIntroComp

Yearlong, half credit - 0.5 Course Unit

This full-year course will equip students with the necessary skills to begin writing computer programs and provide an overview of the ways computational tools and approaches can be used to solve problems in many disciplines. Working in a hands-on, collaborative format, students will learn core computer programming concepts of variables, loops, functions, conditionals, arrays, and objects. Students will spend the last trimester applying these skills in the development of software projects. This class meets twice each week and carries no homework load. Open to sophomores, juniors, and seniors.

Prerequisites: None

Math: Advanced Computer Science MAdvCompSci

Science: Advanced Computer Science SAdvCompSci

Yearlong, full credit - 1 Course Unit

Advanced Computer Science equips students with the programming skills to solve a diverse set of complex computational problems. The course covers Object-Oriented Programming principles, data structures and algorithms, and data science and visualization. Each trimester-long unit culminates in a major project in which students are given considerable leeway to pursue specific interests (e.g. video games, arts, economics, physics, and more). Open to juniors and seniors. Prerequisite: Introduction to Computational Thinking or permission of the department.

SENIOR INQUIRY PROJECT - *Spring Trimester, 1 Course Unit*

The program of inquiry offers a particular challenge to members of the senior class. Independent self-initiated challenge brings an authentic intellectual adventure and allows mastery of skills particular to a senior's response to the organizing question. During the period of course registration, juniors may begin consideration of an Inquiry Project that will receive full credit as a spring trimester course in the senior year. In conjunction with the advisor, a junior may elect to take on an independently initiated Inquiry Project.

During the summer between the junior and senior year, the rising senior wishing to pursue an Inquiry Project must draft a proposal to be approved by the Inquiry Team, a group of faculty who oversees the progress of the individual projects; approval of a final proposal must be secured by the end of the fall trimester of the senior year. Students who undertake an Inquiry Project will choose a course load in the winter and spring trimesters that allows time for independent work. While students who undertake an Inquiry Project work independently, the Inquiry Team provides criteria for the assessment of their work and may also be used as a resource for their research.

In any senior class, distinctive abilities and interests abound; the response to the essential question might elicit a variety of Inquiry Projects. Those with a scientific turn of mind may consider cosmology, geology, biology, meteorology, or neurology while humanists might explore literature, memoir, psychology, political science, economics, history, theater, communications, or religion. Technology, geopolitics, art history - all within the scope of the organizing question.

In the last weeks of May students present the publications, performances, exhibitions, or events that demonstrate the culmination of the year's Inquiry. The celebration of the independent inquiry work of seniors allows the entire community to witness the particular response to the organizing question.

DIRECTED STUDIES

The purpose of a Directed Studies course is to provide opportunity for independent scholarship that satisfies an interest that lies outside and beyond the established curriculum. Students can choose a topic in any subject area. The Request for Directed Studies form requires the applicant to design and propose a course in conjunction with a sponsoring teacher, who is willing to supervise and grade the study. Several permissions are required: sponsoring teacher, sponsoring department head, advisor, and the Director of Studies. For senior year courses, permission from the college counselor is also required.

Standard Directed Studies Course:

- earns a half credit
- uses pass/fail grading
- requires a commitment of at least one 65-minute scheduled meeting each week
- may be a year-long or one trimester-long course
- may not apply toward your five full-credit courses per trimester requirement

Modifications to the Standard Directed Studies Course structure are possible with approval. Justification for any changes to the credits earned per term, grading method, or meeting schedule should be detailed on the Request for Directed Studies form.

DEADLINES – Please Read Carefully

Directed Studies courses must be documented on the Request for Directed Studies form approved and submitted before the School's add/drop deadlines listed below. Directed Studies may not be dropped without penalty after the add/drop deadline. Seniors should be aware that Directed Studies (for any term) submitted after September 15, 2024 may not appear on the initial transcript submitted for college applications.

- Year Course Deadline: September 15, 2024
- Fall Term Deadline: September 15, 2024
- Winter Term Deadline: December 4, 2024
- Spring Term Deadline: March 18, 2025

Some departments encourage directed studies with these open-ended offerings. Submission of the Request for Directed Studies form along with the justifications for a non-standard Directed Studies will still be required.