Upper School
Course of Study
2020-21
Dear Poly students,

The 2020-21 Course of Study is this year’s guide through the course-planning process and available courses for the coming school year. As you begin to think about your next year in the Upper School, we encourage you to have conversations with your teachers, advisors, dean, classmates, and parents. Starting in late February, you will meet with your advisor to reflect on and discuss your interests, goals, and plans for the future. Then, working collaboratively with your dean, you will review and confirm your preferred classes for next year. You will be expected to complete your course registration in April.

We have a few items to bring to your attention:

- Students may enroll in a Global Online Academy (GOA) course as a fifth or sixth course (see p. 43). GOA offerings are fully-accredited courses in the Poly curriculum, and student performance in these courses will be included in GPA calculations. They may be taken for credit toward graduation, though not in fulfillment of departmental requirements.

- Electives are subject to enrollment. Not all listed courses are guaranteed to run, and seniors will have priority in those courses that reach capacity.

- Students signing up for electives — including art class selections in each semester — must list a second choice. They should list a third or fourth course only if there is an option they would be willing to take.

As you look ahead to next year, please give thoughtful consideration to your interests and objectives, and choose your class preferences with care. It may be possible to make adjustments to your schedule prior to the drop/add deadlines in September 2020 and February 2021, but it is important not to wait until that time to make decisions. Requesting a desired course during the course-planning process is the best way to facilitate conflict-free enrollment and ensure the viability of your preferred courses.

If you have any questions about the course registration process, please contact your grade-level dean or one of us; we are happy to help.

Jennifer Fleischer  
Director of the Upper School

J.D. Gladden  
Upper School Dean of Instruction
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I. Academic policies and expectations

*General information to help families choose the program that is right for their students in Poly’s Upper School.*

This section of the Course of Study contains information students will need to ensure that they are able to enroll in the courses that are right for them. Families will also find in this section important information concerning academic policies and expectations.

**Graduation requirements**

A Polytechnic School diploma affirms that its recipient has successfully completed a broadly-based program of at least eighteen units of study in the Upper School. Yearlong courses are one unit of credit, and semester courses are one half unit.

Poly students are expected to take five courses each semester. In extenuating circumstances, such as illness or extreme academic difficulty, students may request a reduced course load with approval of the Upper School director and grade-level dean. Participation in Poly’s extracurricular programming is contingent upon enrollment in a full course load.

**Distributional requirements**

In addition to 18 units required for graduation, students must fulfill distributional requirements: specified numbers of credits in each department. Poly’s requirements represent the minimum necessary for graduation from the school. In some cases, the College Counseling Office may recommend an additional year in a discipline. The distributional requirements are as follows:

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts</td>
<td>History and Application (one year) and two electives</td>
</tr>
<tr>
<td>Community Engagement</td>
<td>Ninth grade — eight hours; grades 10-11 — 30 hours</td>
</tr>
<tr>
<td>English</td>
<td>Four years</td>
</tr>
<tr>
<td>History</td>
<td>Three years</td>
</tr>
<tr>
<td>Human Development</td>
<td>Grades 9-11</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Three years</td>
</tr>
<tr>
<td>Outdoor Education</td>
<td>One trip each year (approximately one week each year)</td>
</tr>
<tr>
<td>Physical Education</td>
<td>Six units/seasons</td>
</tr>
<tr>
<td>Science</td>
<td>Three years, including integrated science, biology, and chemistry</td>
</tr>
<tr>
<td>World Languages</td>
<td>Through level III and at least two years of one language</td>
</tr>
</tbody>
</table>

**Grading**

Letter grades correspond roughly to the following criteria:

- A grade of “A” suggests excellent understanding and thorough knowledge of the subject. The student demonstrates mastery in most aspects of the course.
- A grade of “B” indicates good understanding and competence in the subject. The student’s work is commendable in many aspects of the course.
- A grade of “C” corresponds with an adequate understanding and knowledge of the subject. The student’s work may be uneven in some aspects of the course and reflects room for growth.
- A grade in the “D” range is an indicator of minimal understanding and knowledge of the subject. The student’s work is below expectations in many aspects of the course and reflects substantial room for improvement.
- A grade of “F” is commensurate with little or no demonstration of understanding and knowledge of the subject. The student’s work has room for significant improvement in most aspects of the course.
The Upper School grading scale is as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93 – 100%</td>
</tr>
<tr>
<td>A-</td>
<td>90 – 92%</td>
</tr>
<tr>
<td>B+</td>
<td>87 – 89%</td>
</tr>
<tr>
<td>B</td>
<td>83 – 86%</td>
</tr>
<tr>
<td>B-</td>
<td>80 – 82%</td>
</tr>
<tr>
<td>C+</td>
<td>77 – 79%</td>
</tr>
<tr>
<td>C</td>
<td>73 – 76%</td>
</tr>
<tr>
<td>C-</td>
<td>70 – 72%</td>
</tr>
<tr>
<td>D+</td>
<td>67 – 69%</td>
</tr>
<tr>
<td>D</td>
<td>63 – 66%</td>
</tr>
<tr>
<td>D-</td>
<td>60 – 62%</td>
</tr>
<tr>
<td>F</td>
<td>below 60%</td>
</tr>
</tbody>
</table>

For classes of 2023 and 2024:

Transcripts will exclusively indicate a GPA as grades earned. There will be no internal grade point bump for PolyEnriched, AP, or Honors courses.

Credit/no-credit courses

The school may occasionally deem it necessary to change a student’s status in a course to credit/no-credit. This will occur only in extraordinary circumstances of health crisis or family emergency.

The option to take a class on a credit/no-credit basis may allow a student to take a course that he or she may feel is a risk but is an area of interest. Number grades of 70 to 100 percent will rate a “credit.” Grades of 69 percent or lower will be posted as “no-credit.” Often credit/no-credit is not recommended for students because of the uncertain personal investment it may evoke, as well as the uncertain meaning it may have in the college admissions process. However, should a student wish to consider the option for a sixth course, he or she will need to get clearance from the appropriate grade-level dean and department chair.

Repeating classes

While students get Poly graduation credit for courses in which they earn a D, it should be noted that this is not a UC-recommending grade and that students will not receive UC admission credit for this course.

Course load and schedule changes

Once a student’s course schedule has been created in accordance with the process set out in Section IV of this booklet, the student’s grade-level dean and parent(s) must sign a drop/add sheet requesting a change. Students requesting to drop or add a course are expected to meet with their dean to begin the process of making the change.

Any exceptions to the requirements or prerequisites in individual cases must be approved by the department chair, the grade-level dean, and the Upper School director.

Overloads — The academic offerings at Poly are challenging, so students and their families should consider carefully the pros and cons of taking more than five academic subjects. For some students, six academic courses can mean the opportunity to keep up with a second language or to pursue particular interests in history, science, arts, interdisciplinary study, or creative writing by means of electives. But a heavy academic load is not without costs in other areas of the student’s life, and students are encouraged to enroll in a schedule that allows for a healthy balance that maximizes growth and personal wellbeing. Students wishing to take more than five courses are required to fulfill the following:

- Present a record of impressive academic achievement that includes strong grade performance as well as success in meeting day-to-day requirements such as the timely submission of materials;
- Present cogent and convincing reasons for carrying a heavy load;
- Ask for a combination of courses that can be accommodated within the normal schedule structure;
- Have a record of good attendance.

The Upper School director, in consultation with the faculty, department chairs, and deans, will have final approval on both the number and level of courses in a student’s program. Students approved for overloads should be aware that approval does not constitute final enrollment.

Students are not permitted to take more than six academic courses for credit.

**Course changes** — A course change or withdrawal from a course should be made only after discussion with the student’s teacher, dean and advisor, and parents. A student-initiated decision to drop or add a course must be made no later than three weeks into the semester in which the student begins that course. Faculty have the discretion to initiate changes after those deadlines. All changes are subject to the approval of the grade-level dean and the Upper School director.

Course changes that occur after the first quarter will be designated a “W” (for “withdrawn”) on the transcript.

If a student signs up for an arts elective but fails to attend the class and does not formally withdraw from the elective by the deadline for course changes, he or she will receive a NC (“no credit”) on the transcript.

At the time students file college applications in their senior year, they are required to indicate their course load for both semesters. Their acceptance to college is contingent upon successful completion of that entire year of study. Should a student alter his or her course load, the student must contact the college to give notice of the change.

**Level changes** — Students and their families should be aware that once the deadline for student-initiated moves has passed, there is no guarantee that moves of this kind can be accommodated. Section caps and other scheduling constraints may make a move impossible. Moreover, there are some courses whose levels have such fundamentally different characteristics in terms of content that a move is only possible in the early weeks of the year, if at all.

Students should assume that they need to be in the appropriate courses and levels by the end of the third week of each semester.

**Teacher or free period requests** — The scheduler’s priorities are to honor each student’s course requests to the fullest extent possible, to balance teacher load, to facilitate movement across divisions for those teachers who teach on both campuses, and to maintain a sense of fairness about the scheduling process. For these reasons, the school cannot entertain or honor requests for specific teachers, free periods, or other non-curricular elements within the schedule.

**Elective course enrollments**

Because a minimum enrollment is necessary to sustain each class, not all listed classes are guaranteed to run. In the case of elective courses that approach capacity, priority will be given to seniors. If there are additional open spaces in a given class, they will be offered to interested juniors, then sophomores.

**Attendance**

Regular and prompt attendance at all classes, assemblies, and school appointments is required. A student must be at school during the day to participate in activities after school, including athletics, drama, and musical productions. While it is expected that students will attend school regularly, in case of illness the student is always encouraged to stay home and get well. Excessive absences and tardies, however, make it very difficult for students to perform well in their classes and to learn the material fully. Teachers will notify the dean of student life should there be a concern about a student’s absences.

Students missing 10 classes in a particular course during the semester are at risk of losing credit for that course. Poly does not differentiate between excused and unexcused absences; any absence contributes to the total count of classes missed. The dean of student life will notify families starting at six absences.

**Incompletes**

A student may receive an “incomplete” on his or her grade report, should there be exceptional circumstances such as long-term absence due to illness resulting in the student’s being unable to complete the semester’s work within the allotted time. Should a student receive an incomplete, arrangements should be made with the teacher as soon

*Updated 2/16/20*
as possible for a date when the work needs to be completed. The time to make up the incomplete is three weeks. (In special cases, the Upper School director and teacher may extend the time for make-up work.) If a student does not complete the work by the due date, a grade may be turned in that reflects the work completed to date, with the uncompleted material at a failing grade. In some cases, the course will be assigned a "W," indicating that the student has withdrawn from the course.

Tutors
At Poly we believe that all students are capable of being successful in their courses if they select an appropriate course load consistent with departmental permissions, advice from the grade-level dean, and a thoughtful course-selection process. Teachers are available to provide extra support before and after school and during L period, and in most cases that should be sufficient. However, there will be situations for some students when families feel that hiring a tutor seems advisable. In such cases, the school can provide recommendations for locating effective tutors. Families should bear in mind a few common-sense expectations when working with tutors:

- The student’s teacher should always be the first source for questions about the course material and procedures. The classroom teacher is also the best person to provide help on specific assignments that are to be handed in to that teacher for a grade.
- Tutors should not be working with students on material to be submitted for a grade in Poly classes.

Courses taken off campus
In general, courses taken elsewhere will not be accepted for credit toward Poly requirements and may not be taken in lieu of Poly courses. Very occasionally, students who have completed a given sequence of courses at Poly have petitioned for permission to continue their study elsewhere. Before students enroll in classes at other institutions (community college, a four-year college or university, summer school), they should check with the director of college counseling for information about how the course will be presented on the transcript.

Notable exceptions to this policy are the School Year Abroad (p. 44), Global Online Academy (described on p. 43), and select semester programs (by approval). Poly does accept some coursework from these programs for credit toward graduation requirements. Students who hope to participate in SYA or a semester program during their junior or senior year must plan carefully with the Upper School dean of instruction and their grade-level dean to assure that their course selections before and after their time away will enable them to graduate on time. Students who hope to participate in a semester program off campus will need to make arrangements with their grade-level dean and the Upper School director prior to reenrollment. Students who are contemplating a GOA course, particularly if it is to be a fifth course, should check with a grade-level dean.

Homework and the assessment calendar
In an effort to maximize student learning, teachers in the Upper School work to ensure that all homework assignments are effective, essential, and efficient. Additionally, teachers work to ensure that each assignment is absolutely clear in its learning objectives, presentation, instructions, and assessment/grading.

Each teacher is permitted to assign:

- Up to 120 minutes of homework per six-day cycle in a 9th or 10th grade class (averaging 30 minutes per night of class);
- Up to 160 minutes of homework per six-day cycle in an 11th or 12th grade class (averaging 40 minutes per night of class);
- This time allocation includes nightly assignments, incremental work on long-term assignments, and studying for assessments.

The time required for different students to complete the same assignment may vary, however. Moreover, students may find that challenging coursework requires them to exceed those limits in individual courses from time to time. It is therefore essential that students and their families undertake the course selection process (described later in this booklet) with careful attention and a realistic assessment of priorities both in school and out of it.

To be successful at Poly, students must maintain organized daily schedules and calendars for the completion of work. The school requires faculty to maintain course pages that list course requirements, grading policies, and assignments.
A shared online assessment calendar is also maintained for each grade to ensure that major assessments and quizzes are spread out over time, posted in advance, and widely communicated to faculty and students. Students who require additional guidance or support in managing their workload should collaborate with their advisor or consult the appropriate grade-level dean.

Review period
Each class will have two class meetings before block days designated as a review period. The days are closed to any major assignments such as tests, papers, or projects. Teachers may assign regular homework according to the usual parameters, and new material may be introduced during this time.

Academic Supervision
From time to time, students may struggle either with specific elements of individual classes or with the broad range of demands that Poly’s fast-paced, academically-challenging program may place upon them. The faculty and administration may decide to place struggling students on Academic Supervision for reasons related to poor grade performance; extenuating physical, emotional, or mental health circumstances; stresses of transition into the Upper School; or a failure on the student’s part to meet the expectations of his or her instructors.

During Academic Supervision, careful management of the student’s progress and attendance is overseen by the grade-level dean. Parents will receive a letter from the grade-level dean at the onset of Academic Supervision, spelling out the terms of the supervision, as well as its conditions, including resources for support. Resources to assist the student in making academic progress may include student-teacher contracts, scheduled sessions with the learning resources coordinator or grade-level dean, mandated study time in the student resources center in the second floor of Haaga House, or periodic feedback from teachers. During the period of Academic Supervision, the grade-level dean is in regular contact with parents about the student’s progress, and these interactions form the basis for an essential partnership between school and home.

Academic Supervision is conceived as a temporary status; in general, the goal of Poly’s program is to make independent learners of our students. Thus, everything that happens during the course of Academic Supervision should be moving in the direction of greater independence for the student: initiative, self-sufficiency, a capacity for self-advocacy, and of course responsibility on the part of the student. At the close of a period of Academic Supervision, a student’s case will be reviewed by the faculty, the deans, and the Upper School director with the possibility of three distinct outcomes:

1. The student will move off special academic status altogether;
2. The student will move from Academic Supervision to Academic Probation — an indication that the situation has not improved and that the difficulties and degree of struggle for the student are increasing;
3. The student will continue on Academic Supervision.

The latter outcome will be rare precisely because Academic Supervision is designed as a temporary measure that can support the student in remediating or addressing issues that are creating obstacles to his or her academic effectiveness.

Academic Probation
Academic Probation is an indication to a student and his or her family that the student is not making expected progress and that the faculty and administration have significant doubts concerning his or her ability to meet the basic academic requirements necessary to complete the Upper School program. A student may be placed on Academic Probation due to a pattern of poor academic performance in one or more classes, such that the student is at risk of not meeting academic obligations, specifically individual course requirements. Examples of not meeting academic obligations are:

- A GPA for any quarter that is below a 2.0;
- Earning grades of “D” or “F” in one or more subjects in any given quarter;
- Frequent progress reports in one or more classes that indicate a consistent and egregious pattern of late or missing homework, poor performance, or poor attendance.

Like Academic Supervision, Academic Probation is a status that occurs within a bounded timeframe. Parents will typically be informed by letter when the status is to begin and when it is to end; such a letter would come after a
period of intensive preliminary communication between home and school. Ordinarily, periods of Academic Probation will be no briefer than a quarter and no longer than a semester.

However, at the conclusion of each period of Academic Probation, the student’s case will be reviewed by the faculty, the deans, and the Upper School director, after which one of four outcomes will occur:

1. The student will move off special academic status altogether;
2. The student will move from Academic Probation to Academic Supervision;
3. The student will continue on Academic Probation;
4. The student will transition from Poly to a different academic setting.

Again, as with Academic Supervision, the grade-level dean will provide careful supervision of the student’s progress and attendance during the period of Academic Probation. If significant improvement is not shown, the grade-level dean and Upper School director will meet with the student and parents to consider other educational options.
II. Departmental course descriptions

An overview of the curriculum and departmental descriptions of courses

This section of the Course of Study includes detailed information concerning the programming of specific years in the Upper School, as well as detailed descriptions of departmental offerings.

Overview

A four-year program for a Poly student typically looks something like the charts below:

<table>
<thead>
<tr>
<th>FRESHMAN YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
</tr>
<tr>
<td>Arts: History and Application</td>
</tr>
<tr>
<td>English I</td>
</tr>
<tr>
<td>World Religions (History)</td>
</tr>
<tr>
<td>FREE</td>
</tr>
<tr>
<td>GAT or AGFT (Math)</td>
</tr>
<tr>
<td>Integrated Science (Science)</td>
</tr>
<tr>
<td>World Languages</td>
</tr>
<tr>
<td>E-Learning Fundamentals (online)</td>
</tr>
<tr>
<td>Electives: Arts, World Languages</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOPHOMORE YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
</tr>
<tr>
<td>English II</td>
</tr>
<tr>
<td>Perspectives on Modern World History</td>
</tr>
<tr>
<td>Human Development</td>
</tr>
<tr>
<td>FTAA or AAPC (Math)</td>
</tr>
<tr>
<td>Chemistry or PolyEnriched Chemistry (Science)</td>
</tr>
<tr>
<td>World Languages</td>
</tr>
<tr>
<td>Electives: Arts, Creative Writing, Math, Computer Science, Interdisciplinary Study</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JUNIOR YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
</tr>
<tr>
<td>English III AP or American Studies</td>
</tr>
<tr>
<td>U.S. History, AP U.S. History, or American Studies</td>
</tr>
<tr>
<td>Human Development</td>
</tr>
<tr>
<td>ATIC or Calculus AB (Math)</td>
</tr>
<tr>
<td>Biology or AP Biology (Science)</td>
</tr>
<tr>
<td>World Languages</td>
</tr>
<tr>
<td>Electives in Arts, Creative Writing, History, Math, Science, Language, or Interdisciplinary Study</td>
</tr>
</tbody>
</table>
### SENIOR YEAR

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>English IV AP</td>
<td>English IV AP</td>
</tr>
<tr>
<td>History Elective</td>
<td>History Elective</td>
</tr>
<tr>
<td>College Counseling</td>
<td>Human Development</td>
</tr>
<tr>
<td>Calculus AB, Calculus BC, or Statistics (Math)</td>
<td>Calculus AB, Calculus BC, or Statistics (Math)</td>
</tr>
<tr>
<td>Honors or AP Physics or Elective (Science)</td>
<td>Honors or AP Physics or Elective (Science)</td>
</tr>
<tr>
<td>World Languages</td>
<td>World Languages</td>
</tr>
<tr>
<td>Additional Electives in Arts, Creative Writing, History, Math, Science, Language, or Interdisciplinary Study</td>
<td>Additional Electives in Arts, Creative Writing, History, Math, Science, Language, or Interdisciplinary Study</td>
</tr>
</tbody>
</table>

Students and their families should keep in mind five particular points about the above sample lists:

- The one-year History and Application course, a distributional requirement in the arts, is shown above in freshman year. However, there are options for students to fulfill this requirement in each of the four years.
- Distributional requirements for physical education are not represented in the rosters because they typically are fulfilled by the completion of six or more seasons on Poly teams. Those students who choose instead to take Physical Education classes schedule them by sports season; these classes are not part of the regular class roster and are scheduled through the PE Department.
- The Outdoor Education requirement is fulfilled through the completion of yearly class trips (fall for students in grades 9-11; spring for seniors), and these, too, are independent of the regular class roster.
- The requirement in Student Community Engagement also happens outside the structure of the daily schedule, so it is not represented above.
Arts

Mission statement
The mission of the Polytechnic Visual and Performing Arts Departments is to provide students with an educational program of the highest possible quality which prepares them for a lifetime of artistic appreciation and activity. The environment is one that nurtures creativity, intellectual curiosity, and aesthetic understanding, establishing a firm foundation in skills, content, and experience. The departments seek a balance between offering a broad exposure to the arts and providing students the opportunity to achieve at an advanced level in the areas of their choice.

Film: History and Application provides one Global Initiatives Program (GIP) credit toward the Global Scholar Certificate and is designated as such with the * symbol. For more information on the Global Initiatives Program, see p. 43.

Yearlong Arts classes
Each History and Application class offers a survey of the discipline’s history, along with a practical application of the material studied. All academic classes will require homework (outside reading, writing, or rehearsal), quizzes, a final exam, and practical applications (in the form of projects) of the material studied. Students who fulfill the prerequisite requirements may take Advanced Placement Studio Art, as listed below.

Theatre: History and Application
Open to freshmen and sophomores.
This yearlong course gives a general survey of theatrical history. The development of forms will be studied by looking at the trends and styles of different time periods and regions. Readings, lectures, videos, slides, and discussions will cover the theatre from its beginnings in Ancient Greece through modern times. The survey is interrupted occasionally for project work that helps illustrate the style of a certain period. Course goals include: to reflect upon personal and universal meanings in theatre; to explore history through literature; to put theatre into its historical context; to illustrate theatre’s use as a mirror for society; to recognize historical traditions, conventions, and styles; to categorize universal themes; and to give practical applications of the ideas studied, specifically in the creation of an acting technique or design and technical skills. Projects include Commedia and Kabuki acting projects and Baroque scene or costume design. The last quarter of the year is spent on the beginning acting curriculum.

Western Music: History and Application
Open to freshmen and sophomores.
This yearlong survey course explores, through lecture, discussion, and in-class listening, the development of Western music from the ancient Greeks to the present. Focus during first semester is on early music through the Classical Era. Second semester focuses on the Romantic Era through contemporary music, ending with a unit on world music. Course topics include a historical overview of development of musical form and styles, how they are related to other historical events, basic music theory and terminology, biographical information on the great composers (male and female), an appreciation of how all music is interrelated, ear-training and perceptive listening, and a practical application of concepts (singing, playing instruments, composing, etc.).

Visual Art: History and Application
Open to freshmen and sophomores.
This yearlong course is a survey of Western Art and an overview of art from beyond the Western tradition. Starting with Paleolithic prehistoric art and ending with present-day contemporary art, this course is designed to develop a student’s awareness of art and its relationship to history, technology, and communication. Considerable attention will be devoted to the development of the skills and knowledge necessary to interpret the meaning and significance of works of art. The format for this course will be lecture, readings, slideshows, art critiques, field trips, and art projects, including the creation of a sketchbook. Projects will provide insightful knowledge of traditional media and the methods that artists use to express their ideas. This class gives students a strong foundation for further study in visual arts.

Studio Art Fundamentals: History and Application
Open to freshmen and sophomores.
This yearlong course covers the fundamentals of art appreciation and art making. The world of art is divided into four areas: history, theory, technique (process), and the big picture (the relationship of art to other disciplines). Students develop observational, research, and descriptive skills through carefully-constructed projects focusing
on each of these four areas. Perspective drawing, figure drawing, portraiture, formal art analysis, masterwork copy, visual representation of the five senses, and introduction to various two- and three-dimensional media are examples of class assignments. This class gives students a strong foundation for further study in any of the visual arts electives.

**Film: History and Application**
*Open to all grades.*
This yearlong survey course traces the development of film from the birth of moving pictures to present day. Students in this course study film as both an art and a means of communication. They are taught to “read” a film, analyzing its narrative structure, genre conventions, subtext, technical and artistic factors, and purpose. The course also introduces traditions of filmmaking — especially the narrative traditions shared with literature — as well as the history of the cinema. In addition, students examine how films often reflect the times and conditions in which they are made, and conversely, how motion pictures sometimes help shape attitudes and values in society. Students working toward the Global Scholar certificate earn one GIP credit for this course as the curriculum includes a quarter-long study of global cinema. The format is film screenings and analysis, critical writing, teacher- and student-led lectures and discussion, creative assessments, and performance applications (screenwriting, short film projects that include storyboarding, camera work, editing, directing, acting, etc.).

**Advanced Placement Art and Design: Drawing**
**Advanced Placement Art and Design: 2D Art and Design**
*Open to juniors and seniors. Prerequisites: Studio Art Fundamentals: History and Application or Visual Art: History and Application, at least two Visual Arts semester classes, and approval of the instructor.*
In AP Art and Design: Drawing and AP Art and Design: 2D Art and Design, motivated art students work on portfolios for the AP exam. Instead of a written exam, the students digitally submit a portfolio of 15 pieces of artwork and five original works for evaluation by College Board examiners in the spring. Each portfolio must reflect the student’s ability to utilize the elements and principles of design and express a sophisticated level of creativity. In addition to class assignments, each student will independently investigate an area of interest that will be composed of research, exploration, practice, and development of an idea. This is a yearlong, rigorous course designed for the serious junior or senior who is interested in pursuing his or her artwork in a college-level class. The course addresses a broad range of drawing and design issues and media such as light and shade, line quality, form, composition, surface manipulation, and illusion of depth. Examples of art media explored during the year are various drawing, painting, printmaking, and mixed media. Students will develop their skills at working from direct observation and from their imaginations to express both realistic and abstract ideas. Individual and group critiques will be held regularly to evaluate each student’s progress. A field trip will be taken to a local art museum, and the students are expected to visit museums and art galleries on their own for both class assignments and independent research.

In consultation with the instructor, the students sign up for either the Drawing or 2D Art and Design portfolio at the beginning of the school year. The main focus of the Drawing portfolio is mark-making, while the main concern of the 2D Design portfolio is the purposeful use of the elements and principles of art. In addition to various drawing and painting media, the 2D Design portfolio may incorporate photographs, computer art designs, and collages. The Drawing and 2D Design students approach the same classroom and homework assignments with a different focus.

**Performing Arts**

**Mission statement**
The Performing Arts Department is committed to three core principles:

- Art, while innate in some, can be learned by all. We therefore balance excellence with exploration, discipline with freedom, and consummate preparation with bold artistic risk.
- Art, while intrinsically valuable unto itself, educates the whole student. We therefore teach not only drama, music, and dance, but through them integrity, exploration, compassion, acceptance, resilience, confidence, humility, diversity, and love.
- Art, while the purest form of personal expression, transcends the personal and, through collaboration, connects the artist to the ensemble, the ensemble to the community, and the community to the world. We therefore value process over product and encourage students to "love the art in yourself, not yourself in the art.”
The mission of the department, driven by these three core principles, is to provide students with an artistic educational program of the highest quality that nurtures creativity, curiosity, and understanding; teaches students to know themselves and open their hearts to others; and establishes a firm foundation in skills, content, experience, and character.

Semester Performing Arts classes
Except as otherwise noted, all semester arts classes are offered in the fall and the spring. Final scheduling of classes will be determined by enrollment numbers and staffing. If a class is listed as requiring teacher approval, students may sign up for the class, and the teacher will determine eligibility. Class placement is not always sequential; it is at the discretion of the instructor(s). Semester-long performing arts classes are assessed using a credit/no-credit system, except where noted.

Dance 1: Beginning Dance
This course introduces the fundamentals of dance; curriculum includes warm-up and training in contemporary and classical dance techniques. Basic dance steps and vocabulary are emphasized, along with the introduction of choreographic methods. Combinations of movement are taught to synthesize skills. This class performs one number (in addition to opening/closing pieces) in the annual dance recital, which dictates some after-school and weekend rehearsal. Placement in dance class level will be the result of individual assessment and faculty recommendations.

Dance 2: Intermediate Dance
This course continues the dancer's development, through the adding of more steps to the dance vocabulary and with an increasing focus on technique. The class includes warm-up and technique work to build strength, flexibility, and turning skills. Choreographic routines are taught to synthesize skills; students begin to explore their own choreographic ideas. This class performs one or two numbers (in addition to opening/closing pieces) in the annual dance recital, which dictates some after-school and weekend rehearsals. Placement in dance class level will be the result of individual interviews and faculty recommendations.

Dance 3: Advanced Intermediate Dance
This class focuses on the development of a finer technique. As with other dance classes, each meeting includes warm-up and technique work to build strength, flexibility, and skills. More complicated choreographic routines are taught to synthesize skills, and the students participate more in the development of choreography. This class performs two numbers (in addition to opening/closing pieces) in the annual dance recital, requiring some after-school and weekend rehearsals. Placement in dance class level will be the result of individual interviews and faculty recommendations.

Dance 4: Advanced Dance
Advanced Dance continues the dancer's development, through increasing knowledge and practice of the techniques and principles of dance. Students are expected to demonstrate an advanced level of ballet, modern, or jazz technique, as well as strong performance skills and a dedicated work ethic. Training will be based in contemporary and classical dance techniques. Correct body alignment, proper technical execution of movement vocabulary, and artistic expression will be stressed. Advanced combinations of movement are taught to synthesize skills and improve performance; students will further develop their own choreographic ideas and compositions. This class performs one or two numbers (in addition to opening/closing pieces) in the annual dance recital, which dictates some after-school and weekend rehearsals. Placement in dance class level will be the result of individual assessment and faculty recommendations.

Special Studies in Dance
Open to intermediate or advanced dancers or by approval of the instructor.
This course provides greater depth and breadth of instruction and exploration of dance topics and techniques. Topics will include concepts, skills, movement, vocabulary, and artistic expression in the study of ballet, jazz, modern dance, improvisation, and composition. Dances will be created around a theme, utilizing large and/or small groups as well as solo composition. This course will lead choreographers through the process of building dances to the level of performance. Completed choreography will be presented in concert.

Tap Dance
This elective class is generally a beginning tap class, although more advanced students may participate at their own level. The class is geared toward the development of basic tap technique, working in a relaxed mode to gain speed. Basic tap steps will be taught, as will combinations. Course goals include increased strength, stamina, and
control; quick pick-up of steps and routines; development of basic tap technique; and exploration of personal style. This class performs one number (in addition to opening/closing pieces) in the annual dance recital, which dictates some after-school and weekend rehearsals.

**Jazz Band 1**

Jazz Band 1 is designed for Upper School students who play a wind or string instrument, piano, or percussion and are interested in learning or improving jazz skills in a performance setting. Students should have at least one to two years of experience on their instrument and have a basic ability to read music. Experience in jazz is not required. We work on developing musical skill sets such as reading music, listening critically, and playing by ear within a jazz context. This is also a good place for students who play a non-traditional jazz instrument to get a chance to learn about and play jazz. Beginning improvisation, listening skills, and some jazz theory and history will be covered. All students are asked to list the instrument they intend to play when requesting the course.

**Jazz Band 2**

Prerequisites: Short audition and/or approval of the instructor.

Jazz Band 2 is designed for Upper School students who play a wind or string instrument, piano, or percussion and have prior jazz experience or intermediate-to-advanced performance skills. We work to refine development of musical skill sets such as reading and writing musical notation, listening critically, and playing by ear within a jazz context. Students are encouraged to bring their own musical compositions to the class for study and performance. Performances include the fall outdoor concert, two semester concerts, as well as occasional performances off campus. All students are asked to list the instrument they intend to play when requesting the course.

**Music Theory**

Prerequisite: Approval of the instructor. Graded course.

Music theory is a semester-long course that will begin with a quick review of fundamentals, moving to advanced topics related to the study of the language of music. Students will learn to interpret, write, listen to, and discuss music to expand and enhance their understanding of the art form. Designed for students who wish to brush up on their understanding of music fundamentals as well as those looking for advanced study, this course will also cover the principles of harmony, incorporate study of sight singing, and culminate in a composition project where students will apply multiple concepts they have learned.

**Orchestra**

Open to all students who play a wind, string, or percussion instrument, though an informal audition may be required. The Upper School Orchestra performs a wide range of music, from the Baroque to 21st-century works, including student compositions. Ensemble and individual skill are developed through rehearsal and performance. The orchestra performs in the fall for the Music Department assembly, the winter concert, and community outreach performances.

**Pit Orchestra**

Offered in semester 2. Prerequisite: Intermediate-to-advanced ability to read music (students may be asked to audition).

Instrumentation is determined by the choice of the Upper School musical. Occasionally, Poly presents a smaller musical that uses fewer musicians. In these years, only six to eight musicians are needed, and they sometimes can fit on the stage for the production. In years of the large musicals, the orchestra performs in the Garland Theater pit, which is able to hold a maximum of 20 to 24 musicians, including percussion, piano, and conductor. Pit rehearses two to three days a week during the school day. The week before the musical, Pit will have the same schedule as the actors. This includes three mandatory after-school/evening tech rehearsals plus two weekend rehearsals.

**Vocal Ensemble**

This course will provide an opportunity for experienced singers to work in small groups and in solo situations with the instructor, as well as in a large group. Various styles of choral singing and solo singing will be explored (including classical, pop, doo-wop, world music, musical theater, etc.), as well as a variety of repertoire. Different combinations of singers and even singers and instrumentalists will be explored as well. Performance opportunities will include the music assembly, cabaret night, and winter concert.

**Acting 2: Intermediate Acting**

Prerequisites: Eligibility determined by the department.

Acting 2 is a continuation of the acting training begun in third grade, built on in Middle School. It focuses on the development of the skills of acting: physical, vocal, and interpretive. The work involves scene study, monologues,
and improvisational theatre games and techniques. The focus of the class is on developing a reliable acting technique, along with skills improvement in the areas of voice and body. A variety of approaches are offered to give actors a variety of techniques to draw on in their work: Uta Hagen, Anita Jesse, Tadashi Suzuki, Ann Bogart, Robert Lewis, Stella Adler, etc. Students are encouraged to experiment with different styles, genres, and approaches. Actors are expected to perform at some point in the year, either through participation in the play(s) or at assembly.

**Acting 3: Acting Ensemble**

**Prerequisites:** Acting 2 (or its equivalent) and eligibility determined by the department.

This class sometimes combines with the Acting 2 or Acting 4 classes. The curriculum of the Upper School acting program is a continuation of the acting training begun in third grade, built on in Middle School. It focuses on the development of the skills of acting: physical, vocal, and interpretive. The work involves scene study, monologues, and improvisational theatre games and techniques. The focus of the class is on developing a reliable acting technique, along with skills improvement in the areas of voice and body. A variety of approaches are offered to give actors a variety of techniques to draw on in their work: Uta Hagen, Anita Jesse, Tadashi Suzuki, Ann Bogart, Robert Lewis, Stella Adler, etc. Students are encouraged to experiment with different styles, genres, and approaches. Actors are expected to perform at some point in the year, either through participation in the play(s) or at assembly.

**Acting 4: Advanced Acting Ensemble**

**Prerequisites:** Acting 3 (or its equivalent) and eligibility determined by the department.

This final level of acting class also includes audition preparation, especially for those students using a theatre audition as part of their college process. The curriculum of the Upper School acting program is a continuation of the acting training begun in third grade, built on in Middle School. It focuses on the development of the skills of acting: physical, vocal, and interpretive. The work involves scene study, monologues, and improvisational theatre games and techniques. The focus of the class is on developing a reliable acting technique, along with skills improvement in the areas of voice and body. A variety of approaches are offered to give actors a variety of techniques to draw on in their work: Uta Hagen, Anita Jesse, Tadashi Suzuki, Ann Bogart, Robert Lewis, Stella Adler, etc. Students are encouraged to experiment with different styles, genres, and approaches. Actors are expected to perform at some point in the year, either through participation in the play(s) or at assembly.

**Intercultural Theatre* [co-listed in Interdisciplinary Study]**

**Offered in semester 2. Open to juniors and seniors. Graded course.**

This class will give a historical and literary perspective, focusing on “other” voices. These “others” might be different because of race, culture, gender, sexual orientation, or other separating qualities. The concentration will be on the depiction of these “others” in relation to the dominant culture; therefore, intercultural relationships will be central to the exploration. Students will read and discuss plays in this seminar-style course. Material may include: *M. Butterfly* (Hwang), *Zoot Suit* (Valdez), *Anna in the Tropics* (Cruz), *Angels in America* (Kushner), *A Lesson from Aloes* (Fugard), *Death and the King’s Horseman* (Soyinka), a Noh play, *The Thunderstorm* (Yu), *Chitra* (Tagore). The starting place will be to determine the importance of studying these other voices, and how the theatre can be a place that allows these voices to be heard. Sun Huizhu (author of *China Dream*) calls on artists to “pay more attention to an increasingly important reality. More and more people of different cultures are interacting and having problems in their interaction. As intercultural artists — often as ambassadors to other cultures — can we artists do something to address this issue and help solve some of those problems?” (from Richard Schechner’s “An Intercultural Primer” in *American Theatre* magazine, October 1991).

**Play Production**

**This class takes place outside the school day.**

**Prerequisites:** Eligibility determined by the department (may include an informal audition).

This elective is focused on the production of a fully staged play in the fall and, schedule permitting, in the winter. The project is geared toward the achievement of specific goals such as interpretation, characterization, risk-taking, and discipline. The fusion of previously-studied skills and ideas is stressed. Productions are seen as the result of the process and not as an end in themselves. The discipline is artistic as well as social. The commitment to ensemble playing is paramount.

**Directing**

This semester course will explore the basics of theatrical direction, including script choice, script and character analysis, design concepts (sets, lighting, sound, costumes, make-up/hair), blocking (stage movement), rehearsal organization and process, and working with actors. At a minimum, student study should culminate in a detailed
rehearsal schedule, notated script, and performance of a scene. Participation in the course will, ideally, include students interested in directing, acting, and design.

**Spring Musical Production**
*Offered in semester 2.*
This elective class works toward the full production of a musical. Most years, the class is open to any student wishing to participate, and auditions are held to cast the principal roles only; in other years, students must audition to be in the show in any capacity. Students may also participate as assistant directors or dance captains. Rehearsals take place during class time and after school. The class is geared toward the achievement of specific goals such as interpretation, characterization, risk-taking, and discipline. The fusion of previously-studied skills and ideas is stressed. Productions are seen as the result of the process and not as an end in themselves. The discipline is artistic as well as social. The commitment to ensemble playing is paramount.

**Technical Theatre 1-2: Beginning/Intermediate Technical Theatre**
This class focuses on the backstage and behind-the-scenes world of the theatre, exposing students to the process, techniques, and technical considerations involved in mounting theatrical productions. The class gives technical support to all Upper School productions and helps out with Lower School shows as well. All students are given the opportunity to work on the tech crew for at least one Upper School production.

**Technical Theatre 3-4: Advanced Technical Theatre**
This class focuses on the elements of scenic, sound, and lighting design as students work to support Upper School productions. The students’ efforts are primarily focused on developing innovative ways to meet the specific technical demands or particular design challenges associated with individual productions, as well as lighting and running those shows. Emphasis is placed on gaining thorough knowledge of how to operate the equipment in the production booth. Members of this class are given an opportunity to work on productions and encouraged to take on leadership positions.

**Visual Arts**

**Mission statement**
Art is one way we find out who we are. It is a way to share emotion and interest. Art is a universal language crossing all barriers of time and place, allowing us access to a vast array of cultural heritage and, importantly, a wide spectrum of points of view. It is a vehicle to say something about the world, and our perception and experience of it. The study of art gives students freedom, joy, and the confidence to embrace their true selves.

Art is learned. It is based upon the artists of impact who pioneered technique and the way forward. Art education is based upon the pillars of history, theory, technique/process, and the Big Picture. To facilitate broader horizons, art teachers are encouraged to work together as well as with teachers of other disciplines. Art opens eyes. It is important not to see art in isolation but as part of a bigger picture in life.

We strive to encourage art students to step free from their comfort zones, embrace the possibility of failure, and be responsible for honesty and truth in their work. We encourage students to trust their inspiration and infuse their craftsmanship with compassion, creativity and positivity. Through a holistic approach we encourage taking risks and exploring different media.

Boundaries are meant to be pushed. It is our mission to teach our students originality and creativity and give them a lifelong appreciation for art.

**Semester Visual Arts classes**
Except as otherwise noted, all semester arts classes are offered in the fall and the spring. Final scheduling of classes will be determined by enrollment numbers and staffing.

**Ceramics**
This class is designed for the beginning-to-advanced student. Students use sketchbooks for idea development. Slides and DVDs of professional artists are shown to stimulate growth of ideas. The beginning student is given instruction in using the slab roller and the pottery wheel, hand-building forms, and glazing finished work. The class also covers the vocabulary and technical information about clay, glaze, and the firing process. The advanced student is focused toward working with forms that are expected to evolve in an individual direction that the student can relate to and talk about. Advanced students are encouraged to explore sculpture or to work on the
Digital Art
What does it mean to be an artist in the 21st century? Art now exists on a digital platform. This class introduces students to various aspects of digital art in Photoshop and Illustrator. The basic skills of drawing, color theory, design, and perspective will be covered during the semester, running parallel to an understanding of layers, brushes, vectors, filters, and other digital methods. Students will render 3D objects, create landscapes, design vehicles, and “paint” portraits. Study of contemporary digital art culture will also be included. Both beginners and more advanced students are welcome.

Drawing
This class emphasizes the importance of drawing as a fundamental skill in artistic creation. Observational and conceptual class assignments will help the students improve their general drawing skills and understanding of the elements and organizational principles of art. The five global skills of drawing (edges, spaces, relationships, lights and shadows, and Gestalt) will be practiced throughout the semester. Assignments include an upside-down drawing, hand study, drawing of a chair, landscape, profile of a colleague, self-portrait, perspective drawing, and a self-designed final assignment based on the work of a master artist. Various drawing media will be explored such as graphite, pastels, oil pastels, India ink, and charcoal. The students will keep a sketchbook for developing drawing ideas. Each month the class will have a group critique to share and discuss completed work, as well as work in progress. Students who repeat this course will receive individualized assignments and guidance toward improving their drawing skills.

Intermediate Drawing and 2D Design
Offered in semester 2. Prerequisites: Completion of Studio Art Fundamentals or Visual Art: History and Application, and approval of the instructor.
This course helps prepare the serious visual arts student for his or her application to the AP Art and Design: Drawing and AP Art and Design: 2D Art and Design classes. The structure and requirements of the AP Art and Design course and the difference between the two portfolios (Drawing and 2D Art and Design) will be clearly explained. The students will choose and develop a personal idea into a series of five to 10 works of art. This sustained investigation involves research, risk-taking, exploration, reflection, and editing. The students will learn to organize and plan their approaches to art, build a portfolio, and develop a personal style. Regular group and individual critiques will help monitor the progress of each student.

Enameling
Enameling is the fusion of glass on precious and semi-precious metals to create jewelry and other objects of art. This course explores the many techniques that artists have used to control this medium, from the traditional process of Cloisonné to various other methods such as hand-cut stencils, free-hand painting, and arranging chunks and sticks of glass that will be fired in the kiln to 1300 degrees Fahrenheit. Students will learn how to shape copper, work safely around high heat, and become familiar with the general history of enameling. This class may be repeated, enabling students to create projects at an advanced level and to refine their skills.

Introduction to Filmmaking
In this class, students will learn how to use digital video cameras, and they will get an introduction to editing with Adobe Premiere Pro. The course covers the basic elements of pre-production through post-production, visual structure, story, and editing for various film styles. Students will also work with sound and lighting, and they will learn how to create visual special effects including green screen. During the semester, students will produce three short films, working in groups or individually.

Intermediate/Advanced Filmmaking
Prerequisites: Intermediate students — Introduction to Filmmaking or approval of the instructor; advanced students — Intermediate Filmmaking.
The intermediate filmmaking student will be tasked with more complex elements of story, visual composition, camera technique, and expanded use of Adobe Premiere Pro editing software. The advanced film student, having completed Intermediate Filmmaking, will explore varied film styles and conventions. He or she will refine use of lighting, audio, and post-production techniques and effects to produce narrative, documentary, or experimental films. Students in the advanced class will be able to specialize in a specific area such as writing, directing, acting, or editing. Both the intermediate and advanced sections will complete at least one new film meeting elevated requirements. All creative aspects of class are student driven.
Illustration
In this traditional drawing class, students will develop their visual storytelling skills through pencil and watercolor. They will be introduced to different styles of illustration and then use that knowledge to create their own art, learning how to problem-solve their way out of a blank page. There are opportunities to draw using articles, short stories, and a story of each student’s choosing. The class will learn about verbal and visual relationships and explore both narrative and symbolic forms of illustration. With an emphasis on self-expression, the class encourages students to experiment, explore, and refine their individual styles. Beginners and more advanced students are welcome.

Painting
Offered in semester 1.
This class introduces students to the world of modern and contemporary art. Class assignments are designed to give students a deeper appreciation of several major art movements and painters of the last 150 years. The students learn the vocabulary of art analysis and apply it to master work. Various painting and drawing media will be explored such as acrylics, oils, watercolor, and charcoal. The students learn to stretch and prime their own canvases. Each student will keep a sketchbook for idea processing. Observational work includes a still life, self-portrait, landscape painted on the campus grounds, and five sessions of drawing and painting from a live model. Regular group critiques will be held to deepen students’ understanding and ability to express themselves about art. Students who repeat this class will receive individualized assignments and guidance toward improving their painting skills.

Beginning Photography
In this introduction to basic photography from digital camera operations to basic Adobe Photoshop, students learn how to compose images using natural lighting. In the studio the students learn how to upload their images to the computer, edit, adjust, and store their images using Adobe Photoshop.

Intermediate Photography
Prerequisite: Beginning Photography
Introduction to portraiture, studio lighting, and intermediate Adobe Photoshop techniques will be taught. Students learn how to use a manual digital camera, and they gain a greater understanding of lighting with natural, ambient, strobe, and studio lighting. The next level of Adobe Photoshop and an introduction to Adobe Lightroom are covered.

Advanced Photography
Prerequisite: Intermediate Photography
Advanced students study more challenging assignments using manual digital cameras, Adobe Photoshop, and Lightroom to develop their individual style and to explore self-awareness through their artwork. Students also build a portfolio of their photographs to submit to colleges.

Sculpture: Controlling Art in Three Dimensions
This course offers a variety of experience in working with traditional and non-traditional media. Exploring clay, plaster, stone, metal, and plastic, students create original sculpture from their own designs. Techniques include carving with chisels and files, casting with molds, metalworking, polishing, and other practical skills. Slides and actual examples of sculpture are introduced to students to create a base for ideas and a historical reference. Students who repeat this class create projects at an advanced level and refine their skills.

Wood Design
This class is designed for the beginning to advanced student who wishes to create sculpture or functional forms with wood. The course covers the safe use of all the power tools used in class. Slides of professional wood workers’ and students’ work are shown to stimulate ideas for individual creations. Students use sketchbooks for idea development, and the ideas are drawn out and designed before any work begins. Demonstrations of how the student can use the tools to enhance his or her project are given daily. Regular critiques cover design, execution, craftsmanship, and overall success of the project.

Yearbook
The class produces Oakleaves, the Upper School yearbook, in a class composed of students from all grade levels. Students divide the workload and take responsibilities under the direction of yearbook editors who meet regularly outside of class to track progress. The class is advised by a faculty member who helps students with technical problems, organization, senior pages, and parent communications. Most students sign up for two semesters with much of the critical learning occurring in the first semester.
English

Mission statement
The English Department at Polytechnic School believes that language is the primary medium through which we negotiate our understanding of ourselves, of others, and of communities. We strive to foster in our students an awareness and love of the expressive power of language, an appreciation for literary art, and the mastery of critical thinking, reading, writing, and speaking.

English I: Engaging Perspectives
The focus in English I is on perspective consciousness, “the recognition or awareness on the part of the individual that he or she has a view of the world that is not universally shared, that this view of the world has been and continues to be shaped by influences that often escape conscious detection, and that others have views of the world that are profoundly different from one’s own” (“An Attainable Global Perspective,” R. Hanvey). English I seeks to provide the tools for this recognition by asking difficult questions, such as: How does life experience shape my perspective of the world? How does my perspective differ from the perspective of others? How can I recognize and engage with these different perspectives? How does storytelling facilitate this engagement? In asking these questions, we will develop the critical skills necessary to approach, understand, and accommodate cultural difference in our increasingly diverse and interconnected world. And, in order to broaden our understanding of ourselves and our world, we will read and write in a number of genres that may include fairy tales, short stories, visual essays, poems, graphic novels, and plays.

In order to support these ambitious goals, we will cultivate a collaborative learning environment that focuses on developing the critical reading, thinking, and writing skills necessary to work within and across different discursive environments. Through an expansive approach to writing that invites students to work in reflective, expository, persuasive, analytical modes, we will explore literary expression as an act of purpose-driven creative decision-making that empowers students to cultivate and express their ideas and build personal confidence. The writing curriculum is complemented by reading curriculum that offers critical reading as a means of empowering students with the critical-thinking skills to actively engage with the ideas, arguments, images, and emotions of others. These diverse critical reading and writing initiatives are supported by a systematic study of grammar and vocabulary. Students are expected to prepare for and engage in class dialogues regularly.

Texts studied may include: Persepolis, Othello, or Macbeth, and select fairy tales and short stories. Past summer reading texts have included works such as Mindset, Speak, Mr. Penumbra’s 24-Hour Bookstore, and Haroun and the Sea of Stories.

English II: Global Voices
English II explores global voices through the genres of drama, poetry, short story, and the novel with works that span different time periods and cultures in order to gain insight into the different ways the human story is communicated in literature. As we consider the expressive power of narrative, this course will examine the problematic nature of representation by asking whose stories are told and who gets to tell them. With its emphasis on close-reading skills, this course deepens students’ ability to analyze the devices and techniques writers use to convey meaning in these different modes. Students learn to discuss the effects of characterization, setting, symbolism, and subject matter as they begin to formulate and support original, interpretive theses. The systematic study of grammar continues; an emphasis is placed on proper grammar and correct usage. Because students construct their understanding of the texts to a significant degree through the exchange and negotiation of ideas in class discussions, students are expected to prepare thoughtfully and to participate actively every day.


English III: AP English Language and Composition — American Identities
English III AP prepares students for the AP examination in Language and Composition through a study of non-fiction and fiction by writers responding to the American experience. All of the texts that we teach — including essays, memoirs, speeches, sermons, plays, novels, short stories, poems, images, and films — assume that “everything is an argument” in which authors stake out positions about culture, gender, politics, art, religion, and economics. The central question of the course is “What is an American?” We inquire as to what America and Americans should be, analyzing the ideals by which we define our identities, the stories we tell about ourselves,
and the promises we make to those not yet arrived. Students learn to read for the what and the how of an argument — identifying theses, claims, and evidence as well as strategies and devices of persuasion — so that they understand the effects of language. Students apply their knowledge of grammar to the analysis of rhetoric and style and develop, through systematic study of vocabulary, a greater understanding of diction. Writing assignments require students to analyze and model rhetoric, synthesize multiple texts and images, and develop arguments of their own. Thoughtful preparation is essential, and daily oral participation is expected. At the end of the year, students must take the Advanced Placement examination in English Language and Composition.

Texts studied may include: Narrative of the Life of Frederick Douglass, The Great Gatsby, Sula, Between the World and Me, Catcher in the Rye, The Autobiography of Malcolm X, and The Laramie Project.

American Studies: AP English Language and AP United States History [co-listed in History and Interdisciplinary Study]
Prerequisite: Minimum grade of B in sophomore history.
American Studies is a double-block class that combines AP U.S. History and AP English Language and Composition, preparing students for both exams. This course provides a yearlong survey of the history of the United States from colonial roots to the present and the literature that formed and reflected the American identity. The central question of the course — “What is an American?” — guides our inquiry as to what America and Americans should be as we analyze the ideals by which we define our identities, the stories we tell about ourselves, and the promises we make to those not yet arrived. Taking a thematic approach, the course will focus on major historical issues and changes that together have formed our national identity. Historical content will be surveyed through the following themes: geography and the environment; politics and power; work, exchange, and technology; religion; global relations; culture and society; migration and settlement. Lectures and discussions are reinforced with a variety of primary sources, scholarly interpretations of major historical issues, and formal debates. All of the texts that we teach — including essays, memoirs, speeches, sermons, plays, novels, short stories, poems, images, and films — assume that “everything is an argument” in which authors stake out positions about culture, gender, politics, art, religion, and economics. Students learn to read for the what and the how of an argument — identifying theses, claims, and evidence as well as strategies and devices of persuasion — so that they understand the effects of language. Students apply their knowledge of grammar to the analysis of rhetoric and style. A formal research paper is required, focusing each year on a fundamental theme in U.S. history. This course provides students with preparation for the U.S. History SAT Subject Test and Advanced Placement exams in both United States History and English Language and Composition. A model APUSH exam is given at the end of the first semester, and students who enroll are required to take the APUSH and AP English Language and Composition exams in May in addition to a final U.S. History examination in June.

AP Language texts studied may include: The Jungle, Narrative of the Life of Frederick Douglass, All My Sons, Anthem, The Great Gatsby, and The Laramie Project.

Senior English

All senior English classes are yearlong elective offerings of Advanced Placement English Literature and Composition. English IV AP reinforces and extends the analytical frameworks developed in previous years and applies them to literary works of greater formal complexity and maturity of thought. The yearlong course is designed around modes, themes, or long works. All sections emphasize the experiential, interpretive, and evaluative dimensions of reading as students reflect on the meanings of the texts, the artistry of their composition, and the social and historical values they reflect and embody. In addition to writing formal essays on literary topics, students memorize poems, perform dramatic readings, and write informal personal essays and short imitations, parodies, and retorts. Because students construct their understanding of the texts to a significant degree through the exchange and negotiation of ideas in class discussion, students are expected to prepare thoughtfully and to participate orally every day. At the end of the year, students must take the Advanced Placement examination in English Literature and Composition.

Students working toward the Global Scholar certificate earn GIP credit for courses that show the Global Initiatives Program symbol (*). For more information on the Global Initiatives Program, see p. 43.

AP English Literature and Composition: City of Angels [co-listed in History and Interdisciplinary Study]
City of Angels regards Los Angeles — its literature, environment, communities, history, art, architecture, and public health — as a social and scientific phenomenon. As a fundamentally interdisciplinary course, it integrates the literary analysis of AP English Literature with the observational and methodological techniques of lab science.
and matches this skill set with the skills and interests cultivated in courses from across the curriculum. The course will begin by establishing foundational knowledge of the city’s environment and infrastructure: in addition to traditional classroom-based activities, in which students will analyze and discuss LA-based literature, film, history, politics, and art, there will also be a strong “fieldwork” component that takes students into the city’s museums and concert halls, and through its buildings and riverbeds. The course will then build on this foundation to consider the city’s communities through the lens of public health: Students will analyze and discuss historical, scientific, and literary texts; there will also be a significant experience-based component in which students will undertake case studies and lab work that ask them to practice the cultural-medical diagnoses that they are studying. Students in the course will acquire a solid foundation in LA literature and culture and will be given an opportunity to develop their personal interests through long-term projects investigating topics of their choice and culminating in project-based, service-learning partnerships with their local communities.

City of Angels is a unique double-block course that will offer credit in AP English Literature, Lab Science, and History. In order to maximize the potential of the fieldwork component, students will be co-registered in two simultaneous periods, allowing for extended time off campus.


**AP English Literature and Composition: Fantasy, Fiction, and Film**

Fantasy is a notably elastic category of literature and film that includes graphic novels, horror, animation, science fiction, adventure tales, fairytales, religious epics, and even musicals. To narrow this broad scope, our course will start with a basic look at fairytale history, and then explore fantasy through three major lenses: gender, psychology, and politics. Using these foci as a guide, students will study a variety of texts that rewrite tropes endemic to the society in which we live.

Starting with a feminist framework, students will first examine America’s classic “cute-ification” (or Disney-fication) of older European fairytales, and then move toward more nuanced, modern representations of gender in fantasy. While it is true that some fairytales advance traditional gender stereotypes, it is important to see how the genre has also been rewriting these tropes for ages. By focusing on women in both well-known and lesser-known narratives, we will analyze how fantasy creates a space for a new type of heroine (perhaps one that students can see highlighted today in tales such as *The Hunger Games* and *Frozen*). Our exploration of gender roles will then build into the final two units, where students will examine increasingly challenging texts as the year moves forward. Borrowing from psychologists such as Freud and Erikson, students will next explore how the fantasy genre exposes a deeper (often darker) peek into childhood and adulthood, while they once again consider when/where/how traditional roles may be redefined, reversed, and twisted. The year will ultimately culminate with questions about how fantasy can also be used as a space to reimagine various political climates. In doing so, we will finish by reading Alan Moore’s challenging graphic novel *Watchmen*, which asks what 1980s America (New York City in particular) would look like if major historical events, such as the Vietnam War, had ended differently. According to Moore’s fantastical vision of the world, the answer is bleak.

Texts studied may include: *1984, Alice’s Adventures Through the Looking Glass, The Handmaid’s Tale, The Road, Macbeth*, and *Watchmen*.

**AP English Literature and Composition: Reimagining Shakespeare in Our Modern World**

Hip hop sonnets? Gang warfare between rivals in Verona Beach? Privileged children becoming jihadist terrorists? Surviving and transcending sexual assault and its stigma? These examples of modern adaptations of the works of William Shakespeare provide insightful answers to the question that is central to this course: Why do artists and audiences across the centuries and around the globe still respond to Shakespeare’s words, characters, and stories? One possible answer to Shakespeare’s timelessness lies in the intersection of our personal, local, and global realities that can be paradoxically unique and universal. We bring our individual experiences — informed by background, identity, location, and time — to Shakespeare’s plots and characters and reimagine them in ways that incorporate new relevancies. Whether the specific focus of a story is on teenagers in love, betrayals by parents, or the tyranny of power, Shakespeare uses language to explore and express the deep complexity of what it means to be human in ways that remain accessible and applicable today. Students will study several of Shakespeare’s original texts, reaching understanding through class dialogue, analytical writing, cultural research, reflective response, creative writing, and performance. After examining each play, the class will explore a variety of responses to it in genres such as film, poetry, novel, short story, visual art, and graphic novel, including works from China, Japan, Kuwait, Norway, Nigeria, India, and the United States. The class will culminate in creative projects in which students produce their own original responses to one of Shakespeare’s works.

**AP English Literature and Composition: The Pursuit of Happiness***

Benjamin Franklin famously — and perhaps apocryphally — said that Americans were only guaranteed the pursuit of happiness; “you have to catch up with it yourself,” he emphasized. In this class, students will pursue that often elusive concept through a selection of texts and films that include a range of national and global perspectives. They will examine how writers and artists from Basho to Jhumpa Lahiri have grappled with the possibilities, problems, and paradoxes inherent in the search for an individual identity, an authentic sense of self, and a way to inhabit and understand the world with honesty and compassion. Through writing assignments and projects that embrace the personal, analytical, and creative, students will have the opportunity to explore how they want to live and find — or create — meaning and purpose in their own lives.

Texts studied may include: *Sputnik Sweetheart, The Namesake, The Importance of Being Earnest, Mrs. Dalloway,* and *The Brief Wondrous Life of Oscar Wao.*

**Creative Writing Electives**

The English Department offers a variety of one-semester electives in creative writing. One elective is offered each semester on a rotating basis, and final scheduling of classes will be determined by enrollment numbers and staffing. Creative writing electives are open to students in grades 10-12.

**Creative Writing: Nonfiction**

*Offered in semester 1.*

Creative nonfiction is a literary genre in which writers use creative, stylistic techniques to write personal, factual narratives. The course is designed to help students find their individual voice and to craft essays about their specific interests and perspectives. Creative exercises, field trips, and visiting writers prompt a variety of topics about which students may choose to write. Short essays include memoir, an essay of a significant place, and a portrait of a person. In addition, student-run workshops will allow writers to give and receive feedback and to learn about writing as a process. At the conclusion of the course, each student will have a portfolio of polished, completed writing. A culminating reading event will provide writers with the opportunity to present their work.

**Creative Writing: Short Fiction**

*Offered in semester 2.*

This course is designed to promote an understanding of and appreciation for the short story form. By reading stories and modeling techniques for their own writing, students will gain a solid understanding of how to put together a short story. The focus will be on description, conflict and plot, character development, dialogue, and setting. The writing process — from prewriting exercises to final drafts to revision of stories — will be important, but a portfolio of completed stories will be expected at the conclusion of the class. The works-in-progress will be presented in a seminar/workshop setting with a concluding public reading event required by all participants.

**Creative Writing: Poetry**

*Not offered in 2020-21.*

This class is for any student who has been fearful of or in love with poetry. Students will be exposed to a wide variety of poetic forms and styles as a way to better understand how poetry works, as well as to model their own poems. Poetry is a condensing of an emotion or story into a form that uses strong imagery and other poetic devices. Therefore, students will first write their own stories (fiction or nonfiction) and then learn how to turn them into poems. While the stress of the course will not be on performance, students will learn to read poetry and gain confidence in an understanding of this wonderful form. The class will also include “workshops,” during which a student will receive important critical feedback for his or her work. The course will culminate with a public reading event.
**History**

**Mission statement**
The department’s mission is to provide a solid grounding in history, the social sciences, and global studies. Courses are offered on both Western and non-Western topics and are designed to help students understand the breadth of human experience, the evolution of ideas, the role of cause and effect in events, and the interconnectedness of geography, economics, politics, religion, and other related subjects. We strive to develop students’ learning skills through analytical reading, research, writing, and oral expression. In the process, we hope to make a significant contribution to the intellectual life of the school by maintaining high academic standards and encouraging students to explore their own interests in the process of becoming lifelong learners.

**World Religions**
*Yearlong course required for freshmen; meets twice per rotation (counts as half a year of history credit).*
This course is designed for students to study the fundamental components of various major world religions. The course will specifically explore Judaism, Christianity, Islam, Hinduism, and Buddhism. Students will be challenged to learn the foundations of each religion, as well as explore what each religion looked like historically and looks today as practiced in different parts of the world, including within the diversity and culture of Southern California.

**Perspectives on Modern World History**
*Required for sophomores.*
This two-semester course will investigate selected key historical developments in world history since the early modern period. We will explore themes such as imperialism and post-colonialism, revolution and change, agriculture and industrialism, religion and ideologies, government and rights, and warfare and peace efforts. In order to provide the students with a foundational and objective understanding of the modern world, we will examine pivotal global movements from multiple perspectives. Throughout this course, we will seek to connect past events to current issues and developments and also to identify ways in which history illuminates the present.

**United States History and Government**
*Required for juniors who do not take AP United States History.*
United States History and Government is a yearlong course that covers U.S. history from the 1400s to the present. Students will study the major themes of U.S history, including the development of the Constitution, legal system, and government; Native Americans; race relations; immigration; the roles of women in American life; individual rights; industrialism; foreign policy and international relations; and the growth of the United States into a world power. This college-preparatory course, designed to be challenging and thorough in its coverage of the subject, provides time for the exploration of significant topics and themes throughout the year. Readings include a college-level narrative text as well as primary sources, interpretative documents and essays, and a novel or play. Analytical tests and essays are written throughout the year, and a formal research paper is required on a topic of particular interest to the student.

**AP United States History**
*Required for juniors who do not take United States History and Government. Prerequisite: Minimum grade of B in sophomore history.*
Advanced Placement U.S. History provides a yearlong survey of the history of the United States from colonial roots to the present. The course surveys the growth of the American republic as a revolutionary political experiment and traces its development and expansion in relation to its regional neighbors and the world. The course focuses on such topics as colonial settlements and the rise of the early republic, the evolution of the Constitution along with political and social institutions, the growth of the American economy, the rise of the United States to global power, the uses and abuses of democracy, and the making of a multicultural society. In addition to the essential factual information, this course enhances the study of social, political, and economic issues with exposure to intellectual and cultural developments. Lectures and discussions are reinforced with a variety of primary sources, scholarly interpretations of major historical issues, and some formal debates. Students develop their writing skills through analytical essays, refine their skills at objective test taking, and learn to integrate primary sources in document-based analyses. A formal research paper is required, focusing each year on a fundamental theme in U.S. history. This course provides students with preparation for the SAT Subject Test and Advanced Placement exam in United States History. A model AP exam is given at the end of the first semester, and students who enroll are required to take the AP exam in May in addition to a final examination in June.
American Studies: AP English Language and AP United States History [co-listed in History and Interdisciplinary Study]

Prerequisite: Minimum grade of B in sophomore history.

American Studies is a double-block class that combines Advanced Placement U.S. History and Advanced Placement English Language and Composition, preparing students for both AP exams. This course provides a yearlong survey of the history of the United States from colonial roots to the present and the literature that formed and reflected the American identity. The central question of the course — “What is an American?” — guides our inquiry as to what America and Americans should be as we analyze the ideals by which we define our identities, the stories we tell about ourselves, and the promises we make to those not yet arrived. Taking a thematic approach, the course will focus on major historical issues and changes that together have formed our national identity. Historical content will be surveyed through the following themes: geography and the environment; politics and power; work, exchange, and technology; religion; global relations; culture and society; migration and settlement. Lectures and discussions are reinforced with a variety of primary sources, scholarly interpretations of major historical issues, and formal debates. All of the texts that we teach — including essays, memoirs, speeches, sermons, plays, novels, short stories, poems, images, and films — assume that “everything is an argument” in which authors stake out positions about culture, gender, politics, art, religion, and economics. Students learn to read for the what and the how of an argument — identifying theses, claims, and evidence as well as strategies and devices of persuasion — so that they can understand the effects of language. Students apply their knowledge of grammar to the analysis of rhetoric and style. A formal research paper is required, focusing each year on a fundamental theme in U.S. history. This course provides students with preparation for the U.S. History SAT Subject Test and Advanced Placement exams in both United States History and English Language and Composition. A model APUSH exam is given at the end of the first semester, and students who enroll are required to take the APUSH and AP English Language and Composition exams in May in addition to a final U.S. History examination in June.

Junior/senior electives

Students are required to take at least one history department elective during their junior or senior years but are encouraged to take more. All electives are semester long and offered subject to enrollment numbers. Students should select courses with the understanding that they may need to make alternative choices.

Students working toward the Global Scholar certificate earn GIP credit for courses that show the Global Initiatives Program symbol (*). For more information on the Global Initiatives Program, see p. 43.

City of Angels [co-listed in English and Interdisciplinary Studies]

Open to seniors.

City of Angels regards Los Angeles — its literature, environment, communities, history, art, architecture, and public health — as a social and scientific phenomenon. As a fundamentally interdisciplinary course, it integrates the literary analysis of AP English Literature with the observational and methodological techniques of lab science and matches this skill set with the skills and interests cultivated in courses from across the curriculum. The course will begin by establishing foundational knowledge of the city’s environment and infrastructure: In addition to traditional classroom-based activities, in which students will analyze and discuss LA-based literature, film, history, politics, and art, there will also be a strong “fieldwork” component that takes students into the city’s museums and concert halls, and through its buildings and riverbeds. The course will then build on this foundation to consider the city’s communities through the lens of public health: Students will analyze and discuss historical, scientific, and literary texts; there will also be a significant experience-based component in which students will undertake case studies and lab work that ask them to practice the cultural-medical diagnoses that they are studying. Students in the course will acquire a solid foundation in LA literature and culture, and will be given an opportunity to develop their personal interests through long-term projects investigating topics of their choice and culminating in project-based, service-learning partnerships with their local communities.

City of Angels is a unique double-block course that will offer credit in AP English Literature, Lab Science, and History. In order to maximize the potential of the fieldwork component, students will be co-registered in two simultaneous periods, allowing for extended time off campus.

Contemporary Ethical Issues

Contemporary Ethical Issues provides an analytical framework for students to use as they examine topics such as capital punishment, abortion, terrorism and torture, affirmative action, and immigration. The emphasis of the course is to teach students how to think, not what to think about ethics. The course includes reading a variety of
perspectives and viewpoints, writing research papers, in-class essays and weekly ethics-in-the-news analyses, discussing case studies, and viewing documentaries and feature films.

Economics*
Economics provides an introduction to and history of the basic concepts of the discipline such as scarcity, choice, opportunity cost, markets, pricing, inflation, and unemployment. Students examine the roles of businesses, households, government, and the banking system in the U.S. economy. Simulations and reports develop and demonstrate economic systems and principles. In addition, there will be a study of major economic thinkers, the stock market, and how economics affects our way of life, from the marketplace to leisure and recreation.

Globalization and Human Rights*
The contemporary world is defined by globalization, the international network of economic, social, technological, and cultural relationships linking people, corporations, and institutions. This course seeks to examine the role of human rights in this increasingly-interdependent world. Students will first trace the history of human rights and then analyze how globalization affects human rights in today's world through readings, position papers, research projects, guest speakers, class presentations, and debates.

Government and Politics
This course is a survey of American government and politics. The story of our government and political system reveals the ways in which our lives are shaped by individuals and institutions, and it allows us to become better, more informed citizens. The course covers the formal and informal institutions of government, the American political system, public policies, and issues pertaining to citizens’ involvement (political ideology, political socialization, voting). Attention will be paid to the strengths and weaknesses of the American system of government. Finally, knowledge of significant Supreme Court cases, as well as legislation, will enhance students’ understanding of how American government and politics work.

International Relations*
Centered around an active exploration of emergent events, contemporary case studies, and in-class simulations, International Relations provides students with an opportunity to analyze the chief problems, actors, and structures of international politics. Through Anne-Marie Slaughter’s *The Chessboard and the Web*, students will investigate the evolving nature of the state and role of international organizations, as well as the ways in which non-state actors (from social networks to global terrorist organizations) are changing the nature of diplomacy. Through seminars and debates, students will study political change, resistance, and violence, as well as political economy and its accompanying inequality. Each week will begin with an analysis of global news stories and culminate with a student-led activity spotlighting a current international challenge.

The African American Experience
The African American Experience is a history course that will use primary and secondary sources, novels, visual art, film, and music to explore the unique experience of African Americans in the 20th century. We will examine legal, social, economic, cultural, and political issues from the early 1900s to the present. This course is largely constructed around the voices and language used by black people. The course is organized chronologically, with an emphasis on the ideas of black social thought, political protest, and efforts to initiate social change. The course covers the historical foundations and background to the modern black experience, from the struggles after slavery through the Harlem Renaissance, the civil rights movement, and into the 21st century. The course will also look at African American history through seminal legal decisions and the effect they have had on the black experience in America.

Understanding the Past, Transforming the Future: Greeks and Romans in the 21st Century
After centuries of dominance in western curriculums, classics in the last hundred years has faced increasing censure and marginalization for its elitism, exclusivity, and lack of relevance to the problems of the modern world. This course explores how a new generation can learn about and from the Greeks and Romans without either idealizing or vilifying their influence. Texts from Greek and Roman authors in philosophy, sports, science, the creative and visual arts, literature, mythology, religion, and history will be paired with modern authors to highlight how the way Americans think derives from previous interactions between people who shaped our lives and the Greeks and Romans. Students will have the opportunity to critique both harmful ancient-world practices that have reached into the present and the ways in which classics has been misused, but with an eye to preserving and communicating what is valuable for future generations.
Human Development

Mission statement
The Human Development Program is a comprehensive and scaffolded program consisting of a series of three courses. Upper School students learn how to hone in and develop their voice and practice lifelong, applicable skills. The program has many goals, all just as important as the next. They include: developing positive self-image and practicing self-care, building empathy and respect, increasing awareness of and confronting prejudice, advocating for justice through collective action, and building healthy relationships through effective communication. Each course in the series is designed to build on the information and skills learned in the previous course(s), as well as encourage ongoing reflection to clarify values and strengthen decision-making. Grading in the three courses is credit/no-credit.

Human Development 9: Negotiating Identities
Offered in semesters 1 and 2. Required for freshmen.
A successful social and emotional transition to high school is the focal point of this class. Ninth-graders will learn signs and symptoms of anxiety, depression, and other mental health disorders and explore coping strategies and tools for managing and mitigating stress, including resources and supports for themselves or a friend. Through the lens of multiculturalism, students participate in class discussions and lectures, watch video clips, and read passages depicting how multiple identities interact to create unique and complex individuals, as well as build empathy and compassion for others. Guided discussions and role playing promote understanding, acceptance, and respect for differences. This course lays the foundation for developing and cultivating the tools for civil discourse. Students learn how to advocate for themselves and others.

Human Development 10: Healthy Sexuality and Relationships
Yearlong course required for sophomores.
This yearlong course empowers sophomores to utilize the skills they learned from Negotiating Identities and apply them to building healthy relationships and decision making. Students integrate scientifically accurate information about sexuality and healthy relationships with their own personal, family, and community values. Lessons utilize media resources and guest speakers to address social norms and attitudes about alcohol and other drug use and their impact on healthy decision-making. Discussions focus on increasing knowledge and critical-thinking skills to prepare them to make healthy choices related to sexual decision-making. Through roleplay and small-group activities, students continue to develop communication skills and increase feelings of self-efficacy necessary for safe, healthy, and satisfying relationships throughout their lives.

Human Development 11: Authenticity and Decision-making
Required for juniors.
This first-semester course focuses on developing life skills for the real world, such as basic money management and civil discourse. In the first few weeks, students will clarify their values, reflect upon personal experiences, analyze their personality, and examine strengths. Later, students confront biases and habits and evaluate resources and strategies to address and overcome obstacles to authentic decision-making. Strategically held prior to the college application process, this course represents the culmination of the Human Development series, encouraging students to continue to develop their identity and independence. Self-reflection and self-awareness are keys to success in this course and ultimately, equipping juniors to make healthy and authentic decisions throughout their lives.
Interdisciplinary Study

Mission statement
A changing world creates new needs in education. Poly's interdisciplinary studies initiative seeks to engage with those changes, to meet those needs, and to pose curricular questions that may be addressed in novel combinations by the prescribed skills, content, and traditions of the formal academic disciplines. The interdisciplinary studies initiative seeks to provide high-level instruction for students interested in the possibilities of inquiry that partakes of a number of disciplines. The goal in offering courses that are designedly interdisciplinary is to increase Poly students' analytical resourcefulness and to provide them with the opportunity to create their own intellectual frameworks based on the range of skills and content available in an interdisciplinary context.

American Studies: AP English Language and AP United States History [co-listed in History and Interdisciplinary Study]
*Prerequisite: Minimum grade of B in sophomore history.*
American Studies is a double-block class that combines Advanced Placement U.S. History and Advanced Placement English Language and Composition, preparing students for both AP exams. This course provides a yearlong survey of the history of the United States from colonial roots to the present and the literature that formed and reflected the American identity. The central question of the course — “What is an American?” — guides our inquiry as to what America and Americans should be as we analyze the ideals by which we define our identities, the stories we tell about ourselves, and the promises we make to those not yet arrived. Taking a thematic approach, the course will focus on major historical issues and changes that together have formed our national identity. Historical content will be surveyed through the following themes: geography and the environment; politics and power; work, exchange, and technology; religion; global relations; culture and society; migration and settlement. Lectures and discussions are reinforced with a variety of primary sources, scholarly interpretations of major historical issues, and formal debates. All of the texts that we teach — including essays, memoirs, speeches, sermons, plays, novels, short stories, poems, images, and films — assume that “everything is an argument” in which authors stake out positions about culture, gender, politics, art, religion, and economics. Students learn to read for the what and the how of an argument — identifying theses, claims, and evidence as well as strategies and devices of persuasion — so that they understand the effects of language. Students apply their knowledge of grammar to the analysis of rhetoric and style. A formal research paper is required, focusing each year on a fundamental theme in U.S. history. This course provides students with preparation for the U.S. History SAT Subject Test and Advanced Placement exams in both United States History and English Language and Composition. A model APUSH exam is given at the end of the first semester, and students who enroll are required to take the APUSH and AP English Language and Composition exams in May in addition to a final U.S. History examination in June.

City of Angels [co-listed as AP English Literature and Composition: City of Angels]
*Open to seniors.*
City of Angels regards Los Angeles — its literature, environment, communities, history, art, architecture, and public health — as a social and scientific phenomenon. As a fundamentally interdisciplinary course, it integrates the literary analysis of AP English Literature with the observational and methodological techniques of lab science and matches this skill set with the skills and interests cultivated in courses from across the curriculum. The course will begin by establishing foundational knowledge of the city’s environment and infrastructure: In addition to traditional classroom-based activities, in which students will analyze and discuss LA-based literature, film, history, politics, and art, there will also be a strong “fieldwork” component that takes students into the city’s museums and concert halls, and through its buildings and riverbeds. The course will then build on this foundation to consider the city’s communities through the lens of public health: Students will analyze and discuss historical, scientific, and literary texts; there will also be a significant experience-based component in which students will undertake case studies and lab work that ask them to practice the cultural-medical diagnoses that they are studying. Students in the course will acquire a solid foundation in LA literature and culture, and will be given an opportunity to develop their personal interests through long-term projects investigating topics of their choice and culminating in project-based, service-learning partnerships with their local communities.

City of Angels is a unique double-block course that will offer credit in AP English Literature, Lab Science, and History. In order to maximize the potential of the fieldwork component, students will be co-registered in two simultaneous periods, allowing for extended time off campus.
E-Learning Fundamentals [co-listed in Technology and Computer Science]

Required for freshmen. Offered online.

Designed to support the Upper School’s Bring Your Own Device program and to foster skill development in using digital tools to learn, collaborate, and communicate, E-Learning Fundamentals is a yearlong credit/no-credit course delivered through the online learning management system [LMS] Canvas. The course begins with an orientation workshop on campus during which students will be introduced to the BYOD program and online class structure, which covers the principles of safe and ethical use of school technology resources, email conventions and management practices, and core tenets of digital citizenship. Students complete a series of lessons and at least one assignment per six-day cycle that supports projects and curriculum in their core academic classes and school activities. The assignments are comprised of skills-based learning that scaffolds the use of Google Suite, computer science, collaborative project-based learning, social media literacy, and visual design elements. The year culminates with the completion of an electronic portfolio that will showcase the student’s achievements.

Global Citizenship Seminar*

Open to seniors

This seminar for Global Scholars will help students understand their role as global citizens and leaders in an increasingly interconnected world. The interdisciplinary coursework will help students understand current and historical challenges around the world, assess initiatives that offer resolutions to these problems, and reflect upon the effects of their implementation. Along with three other GIP-approved electives, this course is required for all Global Scholar candidates. The course will meet on a once-a-rotation basis throughout the year, and will be offered credit/no-credit.

Intercultural Theatre* [co-listed in Performing Arts]

Offered in semester 2. Open to juniors and seniors.

This class will give a historical and literary perspective, focusing on “other” voices. These “others” might be different because of race, culture, gender, sexual orientation, or other separating qualities. The concentration will be on the depiction of these “others” in relation to the dominant culture; therefore, intercultural relationships will be central to the exploration. Students will read and discuss plays in this seminar-style course. Material may include: M. Butterfly (Hwang), Zoot Suit (Valdez), Anna in the Tropics (Cruz), Angels in America (Kushner), A Lesson from Aloes (Fugard), Death and the King’s Horseman (Soyinka), a Noh play, The Thunderstorm (Yu), Chitr (Tagore). The starting place will be to determine the importance of studying these other voices, and how the theatre can be a place that allows these voices to be heard. Sun Huizhu (author of China Dream) calls on artists to “pay more attention to an increasingly important reality. More and more people of different cultures are interacting and having problems in their interaction. As intercultural artists — often as ambassadors to other cultures — can we artists do something to address this issue and help solve some of those problems?” (from Richard Schechner’s “An Intercultural Primer” in American Theatre magazine, October 1991).

New Media Psychology and Application

Offered in semester 2. Open to sophomores, juniors, and seniors.

“Today we are beginning to notice that the new media are not just mechanical gimmicks for creating worlds of illusion, but new languages with new and unique powers of expression” — Marshall McLuhan. In this project-based, interdisciplinary seminar course, students learn the fundamental principles of media psychology and visual design that will enable them to harness these new powers of expression to contribute effectively to the mass exchange of ideas and information in a globally connected world.

Drawing on a number of interdisciplinary subjects, the course begins with an historical overview of the characteristics and evolution of traditional modes of mass communication, including oral tradition, visual art, print, radio, film, and television, with an emphasis on how media producers have employed specific strategies and techniques to influence personal beliefs, cultural identities, and social values. The class then moves to a seminar format in which students explore special topics in emerging participatory communication technologies by conducting research and leading class discussions. Through a series of creative group and individual projects in a variety of new media including blogs, wikis, social networks, and websites, students synthesize their understanding of media psychology, visual techniques, and rhetorical strategies. The class culminates with an individual capstone project designed by each student around a personal interest as well as with a digital portfolio assignment that showcases unit assignments, projects, and learner reflections.

*Students working toward the Global Scholar certificate earn GIP credit for courses that show the Global Initiatives Program symbol (*). For more information on the Global Initiatives Program, see p. 43.
Mathematics

Mission statement
We acknowledge that mathematics is rich both in its intellectual content and its applicability to an enormous range of practical problems of human concern. We strive to engender in each student a level of mathematical sophistication that maximizes his or her options in choosing a future course of study. The rapid advances in computational technology in recent years have called into question the need for extended instruction in certain areas of arithmetic, algebra, geometry, trigonometry, and calculus while it has expanded the range of meaningful problems that we can explore with our students. Through a carefully-structured program of guided exploration, data analysis, and mathematical modeling, we seek to help students understand that mathematics is not merely a body of knowledge but a problem-solving enterprise in which creativity and intuition go hand in hand with factual knowledge to produce effective solutions to significant problems. In the end, we hope students experience the excitement of discovery through active involvement in the revelation of mathematical relationships and applications.

Technology
The Mathematics Department is committed to the appropriate use of computers, tablets, and specialized math software.

Placement
Students entering the Upper School at the beginning of ninth grade will be placed in one of two tracks: the accelerated track or the honors track. The accelerated track sequence culminates with Advanced Placement Calculus BC. The honors track culminates with Advanced Placement Calculus AB or Statistics. Each spring the placement of each rising ninth-grader is determined by a committee composed of Middle and Upper School Math Department chairs, the Middle School director, and the current ninth grade math instructors. During the course registration process, a student may petition the department to move up from the honors track to the accelerated. In order for the petition to be considered, the student must achieve an overall average of 95 percent or better in his or her current math course. If the petition is accepted, the student will receive instructions concerning what course or materials must be completed during the summer in order for a successful transfer. Students may petition the department to move from the accelerated track to the honors at any time.

Courses and standardized testing recommendations

<table>
<thead>
<tr>
<th>Grade</th>
<th>Accelerated Track</th>
<th>Honors Track</th>
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<tbody>
<tr>
<td>9th</td>
<td>Analytic Geometry and Functions with Transformations</td>
<td>Geometry and Algebra with Transformations</td>
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| 10th  | Advanced Algebra and Pre-Calculus  
*June: SAT Subject Test — Math Level 2* | Functions, Trigonometry, and Advanced Algebra |
| 11th  | Advanced Placement Calculus AB  
*March: SAT*  
*AP Calculus AB Exam* | Advanced Topics and an Introduction to Calculus, Honors  
*March: SAT*  
*June: SAT Subject Test — Math Level 2* |
| 12th  | Advanced Placement Calculus BC  
*AP Calculus BC Exam* | Advanced Placement Calculus AB  
*AP Calculus AB Exam*  
*Statistics* |

Geometry and Algebra with Transformations
Required of freshmen who do not take Analytic Geometry and Functions with Transformations.
A central focus of this course is the use of geometric transformations (reflections, rotations, scale changes, and translations) to relate algebraic and geometric concepts. In this context, students will study how to create equations for specific lines, circles, ellipses, trigonometric functions, and parabolas by transforming an equation for a basic graph to fit the requirements of a given problem. Matrices are used throughout the course as a tool for describing transformations and to solve systems of equations. Students develop linear and quadratic models to describe realistic problems. They study linear programming, parallel line relationships, similarity, direct variation, inverse variation, parametric equations, geometric probability, and are introduced to the concept of functions. The unit circle is used to derive basic trigonometric identities, and students are introduced to radian
Analytic Geometry and Functions with Transformations
Open to freshmen with eligibility determined by the placement committee.
A central focus of this course is the use of geometric transformations (reflections, rotations, scale changes, and translations) to relate algebraic and geometric concepts. In this context, students will study how to create equations for specific lines, conic sections, quadratics, cubics, and exponential and logarithmic functions by transforming an equation for a basic graph to fit the requirements of a given problem. Matrices are used throughout the course as a tool for describing transformations and solving systems of equations. Students study linear and non-linear systems and linear programming. Work with trigonometric functions includes the development of the circular functions, right triangle trigonometry, and the derivation and use of the Laws of Sines and Cosines. Sequences and series are studied as mathematical models.

Functions, Trigonometry, and Advanced Algebra
Required of sophomores who do not take Advanced Algebra and Pre-Calculus. Prerequisites: Minimum grade of C- in Geometry and Algebra with Transformations and eligibility as determined by the department.
This course will examine ways to make and interpret mathematical representations of events. Techniques for finding patterns in data will be learned, and students will use transformational families of polynomial, step, circular, exponential, and logarithmic functions to “fit” data. Familiar concepts will be combined to solve more complex problems (e.g., the synthesis of conic sections and parametric functions yielding projectile motion). Based on work from the previous course, further study of trigonometric functions includes the development of the circular functions, right triangle trigonometry, and the re-derivation and use of the Law of Sines, Law of Cosines, and special area formulas. All six trigonometric functions are defined, and emphasis is placed on graphing these functions and their inverses. The topic of sequences and series is further explored to include infinite series and is used to make the preliminary connections to exponential and logarithmic functions and modeling. The course includes an introduction to Boolean logic, truth tables, and the creation of algorithms.

Advanced Algebra and Pre-Calculus
Required of sophomores who do not take Functions, Trigonometry, and Advanced Algebra. Prerequisites: Minimum grade of B in Analytic Geometry and Functions with Transformations and department eligibility.
This course begins with an introduction to logic, truth tables, and Boolean Algebra. Drawing on work completed in the previous course (AGFT), the key characteristics of polynomial, sinusoidal, exponential, logarithmic, and rational functions are explored. A statistical section covers some basic ideas using combination, permutation, normal distribution, mean, median, mode, and standard deviation. A discussion of average and instantaneous velocities leads to an intuitive understanding of the first and second derivatives and their relationships to a given function. Derivative rules are developed from basic symmetric and asymmetric definitions. Extensive work in reviewing and expanding algebraic principles and creating equivalent expressions prepares the students to do the advanced algebraic manipulations required. The use of equations to model data created in class continues, involving quadratic, cubic, quartic, sinusoidal, and exponential data. Much work is done connecting the equation to the graph and vice versa.

Advanced Topics and an Introduction to Calculus, Honors
Required for juniors who do not take AP Calculus AB. Prerequisites: Minimum grade of C- in Functions, Trigonometry, and Advanced Algebra and eligibility determined by the department.
Drawing on work completed in the previous courses, polynomial, rational, circular, exponential, and logarithmic families of functions will be studied in depth. A statistical section covers some basic ideas using combination, permutation, normal distribution, mean, median, mode, and standard deviation. A discussion of average and instantaneous velocities leads to an intuitive understanding of the first and second derivatives and their relationships to a given function. Derivative rules are developed from basic symmetric and asymmetric definitions.

Advanced Placement Calculus AB [11th grade]
Required for juniors who do not take Advanced Topics and an Introduction to Calculus, Honors. Prerequisites: Minimum grade of B in Advanced Algebra and Pre-Calculus and eligibility determined by the department.
This course has two purposes. One is to thoroughly prepare each student to excel on the AB Level Advanced Placement exam that each student is required to take in May. This preparation includes a careful introduction to derivatives as functions whose values are rates of change and to integrals, which measure accumulated change. Related concept topics include limits and continuity, numeric approximations of rates of change, and numeric measurement. Transformations are used in conjunction with the unit circle to derive and explore the use of complex numbers and polar coordinates.
approximations of accumulated change. The second purpose of the course is to give students experience using calculus as a tool to model patterns of change in dynamic systems. Emphasis will be placed on relating mathematical objects to real-life experiences. The aim is for students to gain an accurate sense of the power of calculus to describe and analyze change.

Electives

**Advanced Placement Calculus AB [12th grade]**

Open to seniors. Prerequisites: Minimum grade of B in Advanced Topics and an Introduction to Calculus, Honors and eligibility determined by department.

This course has two purposes. One is to thoroughly prepare each student to excel on the AB Level Advanced Placement exam that each student is required to take in May. This preparation includes a careful introduction to derivatives as accumulated change. Related concept topics include limits and continuity, numeric approximations of rates of change, and numeric approximations of accumulated change. The second purpose of the course is to give students experience using calculus as a tool to model patterns of change in dynamic systems. Emphasis will be placed on relating mathematical objects to real-life experiences. The aim is for students to gain an accurate sense of the power of calculus to describe and analyze change.

**Advanced Placement Calculus BC with Selected Topics**

Open to seniors. Prerequisite: Minimum grade of B in AP Calculus AB and eligibility determined by department.

Continuing the study of calculus begun in the Calculus AB course, the goal of this course is to train students to master all topics on the College Board’s Advanced Placement Calculus BC Exam. A portion of the course will be devoted to the topics in the Calculus BC syllabus of the College Board that are not in the AB syllabus. These topics include: special techniques for identifying anti-derivatives, the calculus of parametric and polar curves, more advanced first-order differential equations, and series representations of functions. Other selected topics may include the study of vectors and linear algebra.

**Statistics in Action**

Open to seniors.

Statistics has been described as a mathematics whose sole purpose is to be useful. It can certainly help us understand some of the most important questions of our time. Is our climate really changing? Are there historical structures of injustice? Are we running out of oil? How is gender inequity evident in societies around the world? Statistics suggests answers to these and countless other critical questions.

This interdisciplinary course encourages students to use the language of statistics to explore the world around them. Learning the traditional tools of statistics while also exploring current events, students will see how statistics can give them fresh insights into persistent problems. Using learning in original and independent projects is a major focus of the class; students will design and implement at least one major research project on the Poly campus and will partner with another organization to study another phenomenon in a service-learning project. The course emphasizes numeracy and a more sophisticated understanding of the issues most pressing to the world today, and it provides a space for students to utilize that understanding to create positive change.

**Introduction to Abstract Algebra**

Open to sophomores, juniors, and seniors.

This course will be an introduction to concepts found in abstract algebra and number theory, which are subjects that a math undergraduate would study in college after completing calculus. Knowledge of calculus is not required for this course, only an interest in exploring numbers and algebraic structures on a deeper level. We will begin with number theory and discuss topics such as the division algorithm, greatest common divisors, primes, congruence classes, and modular arithmetic. Students will see how these topics have applications to cryptography. Various proof-writing techniques will be quickly outlined during this time, so a course in mathematical writing is not a prerequisite. We will discuss sets and functions and then move on to the area of group theory by beginning with the study of the permutations of finite sets. The remainder of the course will focus on the algebraic structure of groups, subgroups, cosets, and Lagrange’s Theorem. If time permits, we will also explore polynomial arithmetic and the Fundamental Theorem of Algebra.

**Introduction to Engineering**

This one-semester math elective is open to seniors who have completed or are enrolled in AP Calculus AB.

The purpose of the class is three-fold: to expose students to different types of engineering: mechanical, civil, chemical, material, bio-medical, process, electrical, and computer engineering; to give students a set of basic engineering skills, such as the application of mathematical principles to everyday problems, optimization, the
ability to perform accurate and quick estimations, the ability to convert units of measure and assign these for various physical quantities, technical drawing, elements of design and the use of computational software; and to develop problem-solving approaches of Zooming In and Zooming Out. With a focus on interactive presentations, the class involves the students in cooperative hands-on activities that emphasize engineering skills from identifying the problem and the parameters of the solution, to determining and mapping out the solution, preparing and approving a budget, designating and allocating tasks, and presenting a manageable plan to ensure project completion. Class activities include group discussions, project-based problem solving, and presentations. Lectures are used to introduce and explain the different types of engineering and to direct students when math applications are required. The class also includes field trips to nearby engineering, manufacturing, and industrial facilities and a construction site (a highway or an office building), as well as guest lectures.

**Mathematical Reasoning**

Open to sophomores, juniors, and seniors.

The purpose of this one-semester course is to introduce students to the mechanics of proof-writing and low-level logic within the framework of number theory. Students will learn (review) conditional statements and inverse, converse, and contrapositive statements leading to proof by contradiction as a proof technique. As the semester progresses, an emphasis on writing formal proofs will be added. Number theoretic topics to be covered will include: the Division Algorithm, Well-Ordering and the Principle of Induction with proof by induction, the axiomatic foundations of the natural numbers/integers, prime factorizations with greatest common divisors (GCDs) and least common multiples (LCMs), Diophantine equations and modular arithmetic, equivalence relations, the structures of the integers modulo \( n \) (\( \mathbb{Z}_n \)), theorems of Euler and Wilson, cryptography and ciphers, ending with an introduction to algebraic structures designed as a lead-in to the Abstract Algebra class. Should time permit, the rigorous development of \( \mathbb{Z}_n \) in terms of equivalence classes will be presented.

*Students working toward the Global Scholar certificate earn GIP credit for courses that show the Global Initiatives Program symbol (*). For more information on the Global Initiatives Program, see p. 43.*
Science

Mission statement
The rationale for science education is that competence in science enables individuals to respond intelligently to phenomena and events in nature and to influence aspects of their personal environment and destiny. At a societal level, overall competence in science for all citizens is necessary to maintain and improve our planet and the human condition. Because science and technology affect everyone’s life, it is imperative for students to understand science as a dynamic social phenomenon and to be able to evaluate the vast and changing body of information. The mission of a science teacher is to help students become scientifically literate, appreciate and enjoy their understanding of nature, and acknowledge the intrinsic self-correcting nature of science.

Laboratory courses
All of these courses are yearlong. Three years of Poly laboratory science are required for graduation, including biology, chemistry, and physics. The most common sequence is Integrated Science in the freshman year, Chemistry or AP Chemistry in the sophomore year, Biology or AP Biology in the junior year, and science electives and/or Honors or AP Physics in the senior year. Instances of students following other sequences are rare, but it may be possible to arrange another path with permission of the department.

Eligibility for enrollment in AP courses will be determined by the department using criteria identified by AP teachers as necessary for success in a rigorous AP course.

Integrated Science
This course introduces students to the scientific mindset and fosters an inquisitive learning model. An overarching theme of energy will anchor students’ explorations through physics, chemistry, and biology, which will subsequently guide them through their future science courses. Topics include classical mechanics, electrostatics, atomic structure, nuclear physics, chemical bonding, macromolecules, metabolism, ecology, and the biosphere. Laboratory exercises correlate with discussion topics in class. In lab and in class, students practice using the scientific method; using significant figures, SI units and prefixes, and scientific notation in quantitative problem solving; using appropriate laboratory techniques; collecting and analyzing data; science reading comprehension and synthesis; and creative problem solving.

Chemistry
Prerequisite: Successful completion of Integrated Science.
This course is designed to teach the basic principles of chemistry; specific topics include periodic table of elements, periodic trends, formulas, nomenclature, chemical reactions, stoichiometry, properties and phases of matter, thermochemistry, some bonding theories, aqueous systems, introductory kinetics, thermodynamics and equilibrium, as well as acids and bases. Laboratory experiments and analyses correlate with discussion topics. Additionally, there are thematic and creative student projects throughout the year. Students in this course learn critical reading and analytical skills, improve their problem-solving skills, and work both independently and collaboratively.

PolyEnriched Chemistry
Prerequisite: Eligibility as determined by a departmental process.
This course covers all of the topics covered in the Chemistry course but in greater depth, akin to the fast pace of a first-year college course in chemistry. This course demands that students quickly grasp new concepts and continue to develop their problem-solving skills. Students will be guided through an explore/concept invention/application learning cycle in order to fully engage in scientific practices. These practices include planning and implementing data collection strategies and analysis and working with scientific explanations and theories in order to develop a deep understanding of Chemistry concepts. The major themes for this course include atoms and elements, properties of matter, chemical reactions, kinetics, thermodynamics, and equilibrium. A variety of teaching methodologies will be used including guided inquiry, direct instruction, and discovery-based labs correlated with discussion topics. This course requires a high level of student independence, curiosity, and persistence.

Biology
Prerequisite: Successful completion of high school chemistry.
This course addresses basic biochemical processes, cellular structure and function, cellular energetics, fundamental concepts in classic and molecular genetics, evolution, organisms from viruses to vertebrates, human anatomy and physiology, and ecology. Laboratory exercises are correlated with study topics. Students practice
basic biological lab skills, including use of the microscope, observation and measurement of cellular processes, observation of structure and function in living and preserved organisms, sampling and probability, and genetic engineering techniques. Students also experience inquiry-based investigations based on current content.

**Advanced Placement Biology**

*Prerequisite: Eligibility as determined by a departmental process.*

This yearlong course is similar in scope to Biology but places greater emphasis on scientific reasoning, mathematical modeling, and science practices. It is fast-paced in order to cover the breadth and depth of a first-year college course in biology, and it requires extensive independent reading and studying. Students participate in inquiry-based laboratory exercises as well as procedural labs in molecular biology and biotechnology. This course prepares the student to take the Advanced Placement examination in Biology. Taking the AP examination is a requirement of the course.

**Honors Physics**

*Prerequisite: Successful completion of junior year math course, as often evidenced by a B or better in Advanced Topics and an Introduction to Calculus, Honors or AP Calculus AB.*

This course is designed to offer students a college-level, mostly non-calculus introduction to standard physics topics. Students will apply material covered in classroom lectures and discussions to real-life situations, both in weekly labs and in a long-term engineering project. The first semester offers a study of classical mechanics with a calculus-based analysis of selected topics. In the second semester, students will examine electricity and magnetism, including circuit analysis, electronics, and simple robotics applications. This course is for students who are relatively strong in math and want the challenge of a college-level physics course, but who are probably not planning on a career in engineering or the physical sciences.

**Advanced Placement Physics C: Mechanics/Electricity and Magnetism**

*Prerequisite: Consent of instructor and a high level of success in junior year math course, as often evidenced by an A- or better in Advanced Topics and an Introduction to Calculus (ATIC) or a B+ or better in AP Calculus AB.*

The AP Physics course is a calculus-driven, college-level course that covers classical mechanics during the first semester and electricity and magnetism during the second. An intensive exploration of the fundamental natural laws that govern the universe, this is an ideal course for future science and engineering majors or anyone who enjoys applications of high-level math. Students who complete this course will be prepared to take the Advanced Placement Physics C exams. Taking the AP examinations is a requirement of the course.

**Electives**

These courses are open to juniors and seniors, with some options available to sophomores as well. Most electives do not include a formal laboratory period; students may not use them to complete the three-year laboratory science requirement.

**Introductory Geology**

*Open to sophomores, juniors, and seniors.*

This one-semester course introduces students to the major topics in Earth Science, including the structure and formation of the Earth, the rock cycle and important rock-forming minerals, plate tectonics, weathering and surface processes, and geologic mapping. Students will engage with material in a variety of methods, including class lectures and discussions, as well as lab activities with physical specimens and raw data drawn from the United States Geological Survey (USGS) and other sources. By the end of the course, students should have a firm understanding of how our Earth’s interior and exterior processes are inextricably linked, and how those processes shape the world around us.

**Psychology**

*Open to sophomores, juniors, and seniors.*

The goal of this class is to better understand human behavior and the factors that shape it. Major topics include sensation and perception, learning and motivation, neuropsychology, social, emotional, and moral development, personality and social behavior, and an introduction to abnormal psychology. We will also delve into some of the big questions and controversies that exist in psychology today: why do we obey authority and conform to others, how much of us is nature and how much nurture, and ultimately, how can we use what we know about psychology to improve our lives?
Astronomy, Cosmology, and Relativity
Open to juniors and seniors.
The goal of this class is to tear students’ perception of the physical world apart and then put it back together in a way that more fully reflects the reality of this place. Exploring what they know about their universe, the students will discover that time runs at a different rate in the mountains than it does at the seashore, that the human body is almost completely devoid of physical substance, and that gravitational force as proposed by Newton probably doesn’t exist. In the process, students will learn about astronomy, optics, cosmology, relativity, and a bit of quantum mechanics, string theory, and nuclear physics. Although it may sound difficult, it isn’t — at least not the way the class is framed. But it is fun.

Geology of California
Prerequisite: Introductory Geology. Open to sophomores, juniors, and seniors.
This one-semester course builds on the foundation of Introductory Geology to focus on key geologic features of California. Using a variety of lecture, video, and student-generated lessons, each unit will focus on a topic of California’s geology that is relevant to life in the LA area. Topics include the general geologic history of California, faulting and the formation of the San Andreas fault system, surface processes like landslides and rivers, natural resources like water, oil, and gold, and the effects of climate change on these resources and on California itself. This class will be somewhat driven by student interests, and students will be responsible for researching and presenting many topics throughout the semester.

Kinesiology and Sports Medicine
Open to juniors and seniors.
Branching off of biology, this course will take a more in-depth look at the muscular and skeletal systems, their physiology, what their functions are, and how they work together in movement and function. Through learning medical terminology of the bones and muscles as well as their origins and insertions, students will be able to explore the study of kinesiology and how it relates to injury prevention. We will delve into the mechanisms and traumas of injury to the different types of tissues as well as analyzing the various phases of the healing process to those tissues. Students will also gain an understanding of the various professions that are involved in the sports medicine field, their roles and responsibilities, and how they can help in the prevention, recognition, treatment, and rehabilitation of sports injuries. This course will include various applications that will provide students with hands-on learning opportunities in human anatomy, emergency care procedures, CPR/FA, and strength and conditioning. Students will become proficient in the application of therapeutic modalities and taping techniques to help promote injury prevention and better functional movement.
Technology and Computer Science

Poly's course offerings in technology and computer science provide students with the fundamental technology skills they will need to be successful in the Upper School's Bring Your Own Device Initiative (BYOD) and offer students with an interest in computer technology opportunities to explore computer science in greater depth.

E-Learning Fundamentals [co-listed in Interdisciplinary Studies]

Required for freshmen. Offered online.

Designed to support the Upper School's Bring Your Own Device program and to foster skill development in using digital tools to learn, collaborate, and communicate, E-Learning Fundamentals is a yearlong credit/no-credit course delivered through the online learning management system (LMS) Canvas. The course begins with an orientation workshop on campus during which students will be introduced to the BYOD program and online class structure which covers the principles of safe and ethical use of school technology resources, email conventions and management practices, and core tenets of digital citizenship. Students complete a series of lessons and at least one assignment per six-day cycle that is designed to support projects and curriculum in their core academic classes and school activities. The assignments are comprised of skills-based learning that scaffolds the use of Google Suite, computer science, collaborative project-based learning, social media literacy, and visual design elements. The year culminates with the completion of an electronic portfolio that will showcase the student's achievements.

Introduction to Computer Science

Open to sophomores, juniors, and seniors.

This course presents students with an opportunity to learn computational thinking and computer programming using the Python language. Topics of study include problem analysis, data structures, control structures, program design, and basic algorithms. The course also examines some of the legal, social, and ethical aspects associated with technology use in modern society. Assignments consist of short programming exercises, readings, and larger-scale programming projects. In class, each student needs a laptop computer with an Apple, Microsoft, or Linux operating system installed. Some class time is available for working on assignments, but students also spend significant time working on projects outside of class.

Advanced Placement Computer Science A

Open to juniors and seniors. Prerequisite: consent of the instructor.

The AP Computer Science A course is designed to provide students with an introduction to topics in computer science and software engineering, including problem analysis, design of algorithms, data structures, control structures, and writing computer programs using the Java programming language. Advanced topics in the course include object-oriented programming, recursion, and searching and sorting algorithms. The course will be centered on the College Board's AP Computer Science A curriculum, with supplementary study of graphical interfaces, game design, and technology in modern culture. Assignments, projects, and assessments are both hand-written and coded on computers, and range from short, individual assignments to long-term, team-based projects. In class, each student needs a laptop computer with an Apple, Microsoft, or Linux operating system installed. Some class time is available for working on assignments, but students also spend significant time working on projects outside of class. Taking the AP Examination is a requirement of the course.

Advanced Topics in Computer Science

Offered in semester 2. Prerequisite: Minimum grade of A- in Introduction to Computer Science or AP Computer Science A and consent of the instructor.

The single-semester Advanced Topics in Computer Science course offers highly motivated students the opportunity to expand on the topics covered in the Introductory and AP Computer Science courses. Subjects of study include sorting and searching, algorithm analysis with “Big-O notation,” stacks, queues, and linked lists, recursion, trees, and graphs. Development of these theoretical topics is reinforced by assignments, projects, and assessments that are handwritten and/or coded on computers using the Python language (prior experience with the Python language is helpful but not mandatory). In class, each student needs a laptop computer with an Apple, Microsoft, or Linux operating system installed. Some class time is available for working on assignments, but students also spend significant time working on projects outside of class.

For more information about our Computer Science offerings, please see this link.
**World Languages**

**Mission statement**

The World Languages Department provides a comprehensive course of study of modern languages and Latin in order to foster global awareness and a growing understanding of different cultural values, perspectives, and traditions in the ancient and modern worlds. In the modern language program, the department is committed to developing the four basic skills of listening, speaking, reading, and writing to assist students along their journey toward proficiency. The Latin program is committed to having students read, understand, and interpret Latin through their study of the literature of ancient Rome.

Teachers use a variety of teaching materials, including textbooks, videos, authentic documents, audio materials, computer software, and ultimately unabridged works of literature in the studied language. By creating a non-threatening environment in the classroom, teachers encourage students to experiment with speaking the language. In addition, the department strives to make the transitions between divisions as smooth as possible and to make sure that each student, whether from Poly or another school, is placed in an appropriate level.

To meet the minimum requirement for graduation, a student must complete level III of any one language and two years of studying a language. Students should be aware that most colleges recommend that applicants pursue language study beyond the third year. The World Languages Department encourages students to study more than one language.

For all students new to the Poly Upper School, World Language level placement is determined by the department using Poly’s World Languages Placement test.

**French**

**French I**

The goal of this beginning French course is to provide an in-depth introduction to the language. The class emphasizes the acquisition of the skills required for effective communication at the elementary level, including grammatical structures, vital and appropriate vocabulary, pronunciation, and intonation. Listening comprehension, reading, and writing are also stressed. In addition, students begin to acquire an appreciation for and awareness of various francophone cultures and perspectives. Most instruction is conducted in the target language.

**French II**

*Prerequisite: Minimum grade of C- in French I.*

This level emphasizes the acquisition of intermediate skills, including more advanced grammatical structures, level-appropriate vocabulary, pronunciation, and intonation necessary for more effective communication on a wider range of topics. Most of the spoken tenses are introduced and drilled intensively in order for students to be able to speak in the present, past, and future. Listening comprehension and reading and writing skills continue to be emphasized as well as further study of various francophone cultures. All instruction is conducted in the target language.

**French III**

*Prerequisite: Minimum grade of C- in French II.*

This course is an intermediate/advanced level that emphasizes greater fluency and accuracy, a more sophisticated vocabulary, and advanced grammatical structures such as the remaining verb tenses and the subjunctive mood. The course of study is designed to help students discuss topics beyond their immediate needs and to better express their feelings about the surrounding community and the world in general. Students also study excerpts from 19th- and 20th-century writers of the French and francophone world to help develop analytical skills, to enable them to more effectively discuss their opinions and ideas, and to speak and write more expressively on a wider range of topics.

**Honors French IV***

*Prerequisite: Minimum grade of B in French III.*

This advanced fourth-year course refines the student’s mastery of the grammar topics covered in French I, II, and III. Students are introduced to the skills required for, and the standards of, the Advanced Placement French Language and Culture examination. The course requires a consistency of preparation and focus, along with an ability to keep up with the tempo of the class. In addition to grammar consolidation, other focal points of the class will be advanced vocabulary and idiom acquisition, reading comprehension, and expanding writing and listening.
skills, all of which will help students express themselves more coherently, resourcefully, and with reasonable fluency and accuracy in both written and spoken French. Students will broaden their familiarity with the various cultures of the contemporary francophone world by means of literature, film, and other authentic multimedia materials. This course is a prerequisite for entrance into AP French Language and Culture in the following year.

French in a Global Context*
Prerequisite: Minimum grade of C- in French III, Honors French IV or AP French Language and Culture.
This advanced-level course takes an interdisciplinary approach to helping students refine their language skills while acquiring a stronger awareness and understanding of French and francophone cultures. From page to screen, students will examine text, music, film, and art from West Africa, the Maghreb, and the Antilles, and how they influence French culture. They will be introduced to the diverse peoples, images, cultures, and voices of the French-speaking world as they explore immigrant experience, assimilation, and conflicts of identity that arise as one tries to balance one’s cultural heritage with a successful integration into French society. The course generates greater understanding of the concepts of identity, empathy, and cultural diplomacy, while improving the fluency of students’ expression in French. Students working toward the Global Scholars Certificate earn one GIP credit for this yearlong course.

Texts may include Rue Cases-Nègres by J. Zobel (Martinique), L’Etranger by Camus (Algeria), La Petite Fille de Monsieur Linh by Claude (Vietnam), Enfants d’ici, Parents d’ailleurs by Carole Saturno (Diversity in France), and Un Papillon dans la Cité by Gisèle Pineau (Guadeloupe). Films may include Les Femmes du 6ème étage, Inch Allah Dimanche, Métisse, Rue Cases-Nègres, Le Grand Voyage, Indochine, Le Havre, Les Héritiers, Qu’est-ce qu’on a fait au Bon Dieu?, Welcome, and The Immigrant (Charlie Chaplin, 1917).

Advanced Placement French Language and Culture*
Prerequisite: Eligibility as determined by a departmental process.
This course follows Honors French IV and continues to prepare students to take the AP French Language and Culture examination in May. Taking a holistic approach to language proficiency, this class recognizes the complex interrelatedness of comprehension and comprehensibility, vocabulary usage, language control, communication strategies, and cultural awareness. The instructional focus is on function and not the examination of irregularity and complex grammatical paradigms in the target language. This course promotes both fluency and accuracy in language use and not to overemphasize grammatical accuracy at the expense of communication. In order to better facilitate the study of language and culture, the course is taught in the French language. Students enrolled in this course are required to take the AP examination.

Latin
Introduction to Latin
Introduction to Latin acquaints students with the Roman world through its language and culture. Our textbook series, Ecce Romani, follows a Roman family, the Cornelli, as it enjoys an eventful year in the country and in Rome. Exercises, activities, and assessments are oral as well as written, a departure from traditional Latin grammar instruction but a crucial gateway to strengthening students’ understanding of the language. The class emphasizes language acquisition, but students also learn about the Greco-Roman gods and goddesses, the Trojan War, and Roman legend and history. Rising juniors and seniors with an A- or above in Introduction to Latin may study the approved Intermediate Latin syllabus provided by the school over the summer, and take the Intermediate Latin final exam in mid-August. With a grade of C- or better, these students may move into the relevant Prose and Poetry course.

Intermediate Latin
Prerequisite: Minimum grade of C- in Introduction to Latin
Continuing with the Ecce Romani series, students reinforce the skills and concepts introduced in Introduction to Latin and begin to encounter the grammatical forms and concepts they need for reading authentic prose and poetry. They continue their study of Roman history, especially by reading the Roma sub Rosa mystery series and completing a project using the video game “Rome: Total War.” Rising seniors with an A- or above who would not otherwise be able to take AP Latin may, with written permission from the Intermediate Latin teacher, elect to enter the AP course after completing Intermediate Latin. All other students move on to Prose and Poetry of the Empire.
Prose and Poetry of the Roman Empire
Offered in 2020-21. Prerequisite: Minimum grade of C- in Intermediate Latin; minimum grade of B in Prose and Poetry of the Roman Republic; or minimum grade of C- on the Intermediate Latin final exam.
This reading course introduces students to authors of the Roman Empire, including Petronius, Pliny, Perpetua, and the anonymous compiler of Apollonius, Prince of Tyre. Students explore various genres, including satire, epistles, autobiography, and romance. Grammatical and literary concepts not covered in Intermediate Latin are introduced and speaking and listening skills continued as students engage authentic texts. Students deepen their understanding of the readings they encounter through projects and oral activities. At the end of Prose and Poetry of the Roman Empire, students may decide to go on either to Prose and Poetry of the Roman Republic or AP Latin.

Prose and Poetry of the Roman Republic
Offered in 2019-20. Prerequisite: Minimum grade of C- in Intermediate Latin; minimum grade of B-in Prose and Poetry of the Roman Empire; or minimum grade of C- on the Intermediate Latin final exam.
This reading course introduces students to authors of the Republican period or to those who write about the Republic, including Plautus, Cicero, Caesar, Livy, Catullus, Vergil, and Eutropius. Students encounter a variety of genres, including biography, drama, oratory, epistles, poetry, and history. Grammatical and literary concepts not covered in Intermediate Latin are introduced, former concepts are strengthened and applied in authentic readings, and students deepen their understanding of the readings they encounter through projects and oral activities. At the end of Prose and Poetry of the Roman Republic, students may decide to go on either to Prose and Poetry of the Roman Empire or AP Latin.

Advanced Placement Latin
Prerequisite: Eligibility as determined by a departmental process.
This course is designed to prepare students for the AP Latin Examination in May on portions of Vergil’s Aeneid and Caesar’s Gallic Wars. The course has two objectives: reading Latin with speed and accuracy and placing texts in a literary and cultural context. In order to prepare students for these goals, students will have daily sight-reading assignments of both syllabus passages and other relevant texts. Students will develop the ability to analyze a text grammatically according to the conventions of Latin pedagogical terminology, as well as to recognize literary devices and figures of speech. In addition, students will discuss the readings to gather information about the larger picture of Roman life and its writers’ values. Secondary sources will be included as necessary to supplement the student’s understanding of the history of each author’s work. This course is especially recommended for students who are considering classics study in college and want a rigorous, fast-paced curriculum. Students enrolled in this course are required to take the AP examination.

Latin Out Loud
This semester elective is for seniors who have completed their fourth year of Latin and would like to continue their study of the language. The theme of the course is oral proficiency, and students focus on Latin as a living language. The course emphasizes poetry and oration, which were meant to be heard aloud in Roman times. Students speak Latin in class; read authors and perform their works orally; compose their own speeches and poetry to be performed for their peers; and make field trips to classics-related events around Los Angeles. The capstone project is to visit a Latin Mass after learning the text and exploring the history of the Christian Church and its relationship to Latin. Authors read (and performed!) may include (but are not limited to) Catullus, Cicero, Livy, Vergil, Ovid, Apuleius, and Martial.

Mandarin Chinese
Mandarin Chinese I
This is a beginning-level course designed for students with no Chinese language background. The goal is for students to build a strong foundation in Mandarin. Students will acquire the abilities to accurately pronounce Mandarin, to recognize and write about 300 commonly used characters, to master the basic sentence structures, and to carry on simple conversations by the end of the year. To this end, students are given a sound foundation in Chinese pronunciation, the pinyin system of Romanization, the stroke order of Chinese characters, and the structure of Chinese sentences.

Mandarin Chinese II
Prerequisite: Minimum grade of C- in Mandarin Chinese I.
This course expands on vocabulary, focuses on mastering basic sentence structures, and enhances students’ communicative abilities in Mandarin by developing listening, speaking, writing, and reading skills through
classroom activities and homework exercises that are based on everyday experiences. Students will develop skills to deal with the immediate environment including school and family in formal and transactional settings.

**Mandarin Chinese III**  
*Prerequisite: Minimum grade of C- in Mandarin Chinese II.*  
This course will help students expand from their base in Mandarin I and II to continue to develop their four skills of listening, speaking, reading, and writing. The course will complete and review basic grammar and key sentence patterns of Chinese, provide practice in the appropriate use of idiomatic expressions and further develop skill in reading and writing Chinese characters. It will also build vocabulary, expand reading comprehension, and encourage extensive conversation in Chinese. It will cover additional aspects about Chinese culture and history. In this course students are required to comprehend and produce paragraph-level Chinese.

**Mandarin Chinese IV**  
*Prerequisite: Minimum grade of B- in Mandarin Chinese III.*  
This course continues to develop skills acquired in Mandarin Chinese I, II, and III, and it aims to develop students’ formal writing skills and understanding of more complex aspects of Chinese grammar. The affairs of the class are conducted entirely in the target language. This course also lays a solid foundation for further study of the language at an advanced level. Emphasis continues to be placed on strengthening the four basic skills of listening, speaking, reading, and writing. Students extend their knowledge of Chinese culture and history through work with a wide variety of authentic materials, including literary fiction, biographies, and newspapers. These materials also provide the basis for discussions in class, as well as journal and essay writing.

**Advanced Placement Chinese Language and Culture**  
*Prerequisite: Eligibility as determined by a departmental process.*  
Based on the national Standards for Foreign Language Learning in the 21st Century, the Chinese Language AP course is designed to be the equivalent of a fourth semester of a college course in Mandarin Chinese. It provides students with varied and continuing opportunities to develop and demonstrate their proficiencies across a full range of language modes: interpretive, interpersonal, and presentational. These skills include interpreting a broad range of written and oral texts, participating in two-way interaction in both conversation and writing, and making both spoken and written presentations. In addition, students increase their knowledge of Chinese culture, extend connection to cross-curricular objectives, and enhance comparisons of culture and language use within broader communities beyond the traditional school environment. Students enrolled in this course are required to take the AP examination.

**Spanish**

**Spanish I**  
The goal of this beginning Spanish course is to provide an in-depth introduction to the language. The class emphasizes the acquisition of the skills required for effective communication at the elementary level, including grammatical structures, vital and appropriate vocabulary, pronunciation, and intonation. Listening comprehension, reading, and writing are also stressed. In addition, students begin to acquire an appreciation for and awareness of various Hispanic cultures and perspectives. Most instruction is conducted in the target language.

**Spanish II**  
*Prerequisite: Minimum grade of C- in Spanish I.*  
This level emphasizes the acquisition of intermediate skills, including the more advanced grammatical structures, level-appropriate vocabulary, pronunciation, and intonation necessary for more effective communication on a wider range of topics. All tenses of the indicative and imperative moods are introduced. Listening comprehension and reading and writing skills continue to be emphasized, as well as further study of various Hispanic cultures. All instruction is conducted in the target language.

**Spanish III**  
*Prerequisite: Minimum grade of C- in Spanish II.*  
The purpose of this intermediate level is to develop greater fluency and accuracy in the language. Emphasis is placed on oral and grammatical proficiency, expansion of vocabulary and grammar, listening and reading comprehension, and composition. Classroom activities vary and may include group discussions, debates, and individual and group presentations on a wide array of topics. Readings are drawn from textbooks as well as from authentic literary and cultural documents; listening activities include a variety of other multimedia materials.
Spanish IV
Prerequisite: Minimum grade of C- in Spanish III.
The course is offered to students who would like to solidify their language skills in reading, writing, listening, and speaking. Through the use of various movies and analysis of cultural, literary, and contemporary readings, students acquire a deeper understanding of, and appreciation for, Hispanic cultures, and they refine their proficiency in all four areas of the language. These authentic materials, current events, and topics of interest to all students provide a basis for discussion and composition, enhancement of vocabulary, and the review of grammatical structures previously studied. Upon the completion of this course, students will be equipped with the tools to discuss issues of global importance.

Advanced Placement Spanish Language and Culture*
Prerequisite: Eligibility as determined by a departmental process.
This fourth-year course is designed to provide students the opportunity to experience an advanced program in Spanish. The course will focus on proficiency in all areas of the language described in the goals of Spanish I, II, and III, with a major concentration on reading and listening comprehension, speaking, and composition. At the same time, students will intensify their knowledge of Spanish grammar and broaden their vocabulary and their familiarity with the various cultures of the Hispanic world by means of literature, film, and other authentic multimedia materials. Students enrolled in this course are required to take the AP examination.

Comunidad Global en Acción*
Prerequisite: Minimum grade of C- in Spanish IV.
This fifth-year course is offered as an option for students who wish to take a global approach in their study of Spanish. Students read and discuss poetry, plays, novels, short stories, current events, and popular culture that address human rights issues in Latin America and Spain. Historical topics to modern times will be included. Readings will be derived from different well-known authors and newspaper and magazine articles. Listening and conversation activities include film, music, and other authentic materials. Emphasis is placed on expanding communication skills and grammatical proficiency. Students will take a final examination, make an oral presentation, or write an essay at the end of the course. Students working toward the Global Scholar certificate earn one GIP credit for this yearlong course.

Advanced Placement Spanish Literature and Culture
Prerequisite: Eligibility as determined by a departmental process.
The purpose of this fifth-year course is to develop greater fluency and accuracy in the language, to understand a lecture in Spanish, and to participate actively in a discussion on a literary topic in Spanish. The students will be asked to read major works of Hispanic Literature in all genres and to analyze critically the content of these literary works in oral and written form. Students enrolled in this course are required to take the AP examination in Spanish Literature.
Special departments and programs

Student Community Engagement Program

The primary mission of the Upper School Student Community Engagement program is to develop responsibility and understanding while gaining connection to the community outside the school. Poly believes that appreciation for the communities in which we live is an integral part of being an educated citizen. To this end, all Poly Upper School students commit to the following community engagement efforts:

In their freshman year, students participate in a minimum of eight hours of off-campus community engagement that aligns with the program’s mission and must support one or more of the 2030 Global Goals for Sustainable Development. The student community engagement coordinator and the Upper School Student Community Engagement Council (US-SCEC) organize several opportunities for students, but students may also design their own projects with pre-approval from the coordinator.

Between the end of freshman year and the end of junior year, students are required to complete an additional 30 hours of community engagement. A minimum of 20 of those hours must take place at one off-campus organization or focus on one primary 2030 Global Goal for Sustainable Development. The other 10 may occur at that same organization or in support of the same sustainable development goal or be a combination of other community engagement hours on and off campus.

Seniors have no requirement other than to participate in the community engagement activities that take place during senior week, but they are encouraged to provide leadership by sharing their community engagement experiences with underclassmen. Since the beginning of the Upper School Student Community Engagement program, a majority of the senior class has remained engaged with the community.

Independent study

The independent study program allows Polytechnic students to explore special interests outside of the standard curriculum. Under the supervision of a faculty member, students follow an approved course of study for one semester culminating in a final project.

Juniors and seniors taking five courses and in good academic standing are eligible to propose a course of independent study as a sixth course (credit/no-credit only) in order to investigate a topic of particular interest. The independent study must be academic in focus: previous studies include in-depth investigations in specific areas of history, scientific research, continuation of a language beyond levels offered at Poly, and extensive creative writing and computer programming projects.

The student must arrange to have a faculty advisor to oversee the project and plan regular meetings with this advisor to demonstrate steady progress. The student should obtain the appropriate form and submit it within the first two weeks of the semester to the Upper School dean of instruction. A meeting during the following week will be scheduled with the Independent Study Committee to review the student’s application. If approved, the independent study will take place over the course of one semester.

An independent study may not satisfy a required graduation credit. Students should expect to spend at least three to four hours per week on an independent study and be able to demonstrate growth and development commensurate with that time commitment. A student must be in good academic standing and must maintain his or her GPA in order to continue with the study. Students may not earn Independent Study Program credit for serving as a teacher’s assistant for a course he or she has already taken.

Independent study culminates in a final project or presentation designed to be a public demonstration of the student’s work; the student should work with his or her project advisor to determine the most appropriate and effective method for showcasing the work. Past examples include presentations to the student body or a class, a public website that presents the work, a gallery showing of artistic work, and published collections of writing. Final projects are due before the end of semester block days; at least one member of the Independent Study Committee must be in attendance. Lastly, each student will be expected to complete a reflection and self-evaluation to be submitted to the Independent Study Committee.

One independent study per semester is permitted; if a student wishes to continue the project beyond one semester, the student must submit a new proposal for the next semester.
Outdoor Education

Mission statement
The Outdoor Education program reinforces the school’s mission by removing students from their familiar environments and exposing them to outdoor adventures. The program uses exploration, adventure, and physical challenge in order to develop each student’s self-confidence, sense of personal responsibility, understanding of community, and appreciation for the natural world.

The program works to develop each student’s self-confidence by exposing them to new challenges in an environment that provides managed risk and an opportunity for reflection. Students will:

- Be challenged to take risks;
- Practice thoughtfulness, teamwork, cooperation, problem solving, and patience;
- Reflect on their experience through solo contemplation, conversation, and journaling.

The program works to develop each student’s sense of personal responsibility by requiring them to experience personal autonomy, consider possible outcomes, prioritize the pros and cons of real-world situations, and make decisions in an environment with evident consequences. Students will:

- Be required to take personal responsibility for their basic health, hygiene, and equipment;
- Develop basic outdoor competence skills, including water treatment, protection from the elements, gear management, camp cooking, and basic personal First Aid;
- Plan and prepare their own meals, set up and manage their own camps.

The program works to develop each student’s sense of community by placing them in a small group of peers who must work collaboratively to travel, establish a habitable and safe camp, and manage setbacks and obstacles. Students will:

- Work in collaboration with a small group to overcome real-world incidents;
- Experience firsthand the value of service to others;
- Practice leadership and followership.

The program works to develop each student’s appreciation of the natural world by removing them from the comforts of an urban/suburban environment and exposing them to the natural world; trips emphasize access to picturesque (often wilderness) locations that provide inspiration and awe. Students will:

- Explore a part of the world that exists beyond their immediate environment;
- Develop a deeper awareness of the world, including the complexity of natural ecosystems and responsibility for environmental stewardship;
- Learn to travel in the backcountry in a way that minimizes environmental impact and represents current Leave No Trace best practice;
- Learn technical skills relevant to the specific activities of each trip.

Sample trips include Escalante backpacking, Mt. Whitney backpacking, Mammoth mountain biking, Channel Islands sea kayaking, Joshua Tree rock climbing, Kern River whitewater rafting, Rock Creek Canyon fishing, Point Reyes environmental service.

Physical Education and Athletics
Athletics provides the opportunity for students to experience the competitiveness, leadership, and sportsmanship that are essential to a successful team. The department maintains a no-cut policy throughout, so each student who elects to be part of an athletic team is included.

Students must complete a total of six units to fulfill their physical education (PE)/athletics distributional requirements. Each season on a freshman, JV, or Varsity sport equals one unit, and therefore six seasons of team sports fulfill the requirement. There are 12 seasons in a four-year high school program.
The table below shows the team sports presently offered at Poly:

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<th>BOYS</th>
<th>GIRLS</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td>Cross country</td>
<td>Cross country</td>
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<tr>
<td></td>
<td>Dance Team/Mascots</td>
<td>Dance Team/Mascots</td>
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<td></td>
<td>Fencing</td>
<td>Fencing</td>
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<td></td>
<td>Football</td>
<td>Golf</td>
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<td></td>
<td>Water polo</td>
<td>Tennis</td>
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<td>Volleyball</td>
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<td><strong>Winter</strong></td>
<td>Basketball</td>
<td>Basketball</td>
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<td></td>
<td>Dance Team/Mascots</td>
<td>Dance Team/Mascots</td>
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<td>Fencing</td>
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<td>Water polo</td>
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<td><strong>Spring</strong></td>
<td>Badminton</td>
<td>Badminton</td>
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<td></td>
<td>Baseball</td>
<td>Baseball</td>
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<tr>
<td></td>
<td>Golf</td>
<td>Golf</td>
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<td></td>
<td>Swimming and diving</td>
<td>Swimming and diving</td>
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<td></td>
<td>Tennis</td>
<td>Tennis</td>
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<td></td>
<td>Track and field</td>
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<td></td>
<td>Volleyball</td>
<td>Volleyball</td>
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</table>

Students may wish to take physical education classes offered at Poly as an alternative to team sports. Each PE class counts as one unit, and new courses are offered each athletic season (fall, winter, spring). Classes offered may include Yoga, Weight Room Fitness, and Boot Camp. Students may also participate in an outdoor sport activity (e.g., a club sport, CATZ, dance, cheer, etc.) to fulfill their PE requirements. If a student chooses to participate in an off-campus course, he or she must fill out an Outside PE Credit Form available from the Athletic Office and submit it to the PE department chair prior to each season.

An alternative avenue students may use to attain PE credit is to participate in a dance class offered through the Arts Department. A student must satisfy his or her arts requirement prior to using dance as a PE class and may receive a maximum of two units for dance classes.

**Global Online Academy (GOA)**

Global Online Academy provides Poly students with the opportunity to experience a wider selection of curricula, learn from teachers outside of the Poly community, and work with students from around the world as peers. Courses offered by GOA are “asynchronous,” which means that the common academic experience takes place almost completely online, and they can be approached somewhat more flexibly than courses that meet in the same place at the same time after week. Participants in GOA coursework will be exposed to instructors from 50 member schools around the world, including teachers from China, Japan, Indonesia, Jordan, and the United Kingdom.

GOA has a separate enrollment structure and schedule from Poly’s; students should consult GOA materials for specific information about cost, course availability, and level of academic difficulty. A student may select a GOA course for his or her fifth or sixth academic course in a semester. Where GOA offers coursework that overlaps with Poly’s elective offerings, students are encouraged to select the Poly option.

For more information, students should visit [www.globalonlineacademy.org](http://www.globalonlineacademy.org) or consult the site director or grade-level deans.

**Global Initiatives Program and Global Scholar Certificate**

Poly’s commitment to greater global awareness is expressed most strongly in its Global Initiatives Program, an interdisciplinary initiative that combines the resources of several different departments and a range of faculty within the school. Students may earn a Global Scholar certificate, a distinction that is awarded at the Honors Day Ceremony.
To qualify for the certificate, the following requirements must be fulfilled:

**Study**

- Study of the same modern language for four years, or completion of the highest level of a modern language (French, Spanish, or Mandarin Chinese). Latin students must complete one year of study of a modern world language in their senior year.
- Enroll in the Global Citizenship seminar, which meets once a cycle over the course of the year. This class will reflect on the students’ GIP coursework and discuss the Global Scholars’ roles as global citizens at Poly, prepare for visits from international school groups and global experts, and complete the Global Scholars’ project.
- Successfully complete three GIP-sanctioned courses. Elective courses that qualify for the GIP credit have the * designation next to their titles (note that Film History does not count toward GIP credit if taken in 9th grade). Global Online Academy offerings will be reviewed on a case-by-case basis.
- Completion of an approved interaction program in one of the following areas: a globally focused service project (either local or abroad); or a cross-cultural travel experience (either travel, extended overnight hosting, or a local immersion experience). The travel and service components may be combined in the same trip. Service and/or travel may be done in any year.

**Cultural events**

- Attendance of 10 cultural events over four years and at least four during the senior year. In addition, Global Scholars are required to model global leadership by organizing, promoting, presenting, and blogging about the events.

**Additional requirements**

- Completion of the application for the Global Scholar certificate during the third quarter of the junior year.
- In the spring of the junior year, creation of a blog to reflect on global academic coursework, service projects, travel abroad, the cultural events and international visitors, and the senior year capstone project.
- Over the course of the senior year, the Global Scholar completes a capstone project.

**Off-campus study opportunities**

Students interested in pursuing any off-campus study opportunities should contact the Upper School Dean of Instruction J.D. Gladden at 626-396-6606 or jgladden@polytechnic.org.

**School Year Abroad**

School Year Abroad (www.sya.org) programs combine intensive language instruction and a school-year homestay with instruction in core subjects that is of comparable quality to the Poly program.

Students interested in the SYA programs in France, Spain, Italy, or China must plan carefully and well in advance of the student’s time away. Prior to winter break in sophomore year, the student must meet with his or her grade-level dean to learn more about what is required to make the program fit into graduation and other programs, such as the Global Scholar certificate. During third quarter of sophomore year, the student must meet with Poly’s SYA coordinator to learn about communication with Poly during their year abroad, to complete required documents regarding their standardized testing timeline, and to understand the program in terms of the college search and college admission process. Once students make their final decision to participate in SYA, their parents should notify Poly’s Admission Office and obtain information about the process of reenrollment for senior year.
III. Standardized testing and the Poly curriculum

An overview of pertinent standardized testing at the secondary school level and the Poly curriculum

Standardized testing is required or accepted for admission at most colleges and universities. Polytechnic students will encounter a variety of standardized tests related to the college application and matriculation process: PSAT, SAT, SAT Subject Tests, ACT, and Advanced Placement exams. In this section, the sequencing of these different tests with the progression of courses in the Poly curriculum is described in detail. Additionally, the College Counseling Office hosts an Introduction to Standardized Testing evening for parents. This evening program provides an excellent overview, as well as more in-depth information about testing for Upper School students.

Poly’s SAT coordinator Lisa Caragher may be contacted at 626-396-6463 or lcaragher@polytechnic.org, and Poly’s AP coordinator Paul Geisler may be contacted at pgeisler@polytechnic.org or 626-396-6622.

Parents of students who require testing accommodations for learning differences are encouraged to contact Poly’s Middle and Upper School learning resources specialist to coordinate these requests with the various testing agencies. This process can take some time so parents are encouraged to initiate it by the end of freshman year or as soon as possible.

**PSAT**

All sophomores and juniors take the Preliminary Scholastic Assessment Test (PSAT) in October as a practice test for the SAT. Taking the PSAT enables students to increase their familiarity with standardized test taking and provides an accurate reflection of both the types of questions and the testing conditions that students can expect to encounter when they sit for the SAT.

All sophomores and juniors are automatically registered for the PSAT exam by Poly’s testing coordinator. In grade-level meetings before the PSAT, the sophomore and junior deans provide an introduction to the test, go over the format of the test, and provide each student with a sample PSAT to help familiarize them with the exam format.

PSAT scores are made available directly to students online from the College Board testing agency sometime in mid- to late December. Students should visit www.collegeboard.com to create an account so that they can receive their PSAT scores and register to take the SAT and SAT Subject tests.

PSAT scores obtained from the junior year administration are used for entrance into The National Merit Scholarship Program, an academic scholarship competition that provides a limited number of college scholarships. For more information about the National Merit Scholarship Program, visit www.nationalmerit.org.

**SAT**

The SAT is one of two tests commonly required by colleges and universities of prospective applicants. Redesigned in 2016, the SAT is a three-hour-and-fifty-minute exam (including the “optional” essay) designed to measure a student’s reasoning skills in evidence-based reading, writing, and mathematics, as well as his or her ability to write. The focus of the new SAT is on the knowledge, skills, and understanding that research has identified as most important for college and career readiness and success. There is a greater emphasis on the meaning of words in extended contexts and on how word choice shapes meaning, tone, and impact. The SAT has no guessing penalty so that only correct answers will count toward a student’s raw score. Please note that while the 50-minute essay section of the SAT is optional, all Poly students are encouraged to sit for this portion of the exam as many colleges either require the essay or strongly encourage it.

Historically, Poly students perform best on the junior year spring and senior year fall administrations of the SAT. Poly students should take the SAT for the first time during March or April in the junior year, and most will take it for a second time in either October or November of the senior year. We urge students to be wary of test preparation companies and others who promote early testing. It is financially to their advantage to do so, but rarely does it benefit our students. Freshmen and sophomores are strongly discouraged from taking the SAT, as this is a test that is normed for the spring of junior year.

Unlike the PSAT, juniors and seniors must register on their own to take the SAT. The costs of the tests, as well as late and other fees, test dates, and registration deadlines are available online at www.collegeboard.com. A separate online registration form must be filled out for each date on which a student wants to test. Students are advised to use accuracy when registering for these exams, using the same form of their name, including middle initial or
name, on each registration form. Students should make certain to include Poly’s school code on the registration form: 052402.

Registration for the SAT must be made approximately six weeks in advance of the test date, so juniors are encouraged to register for the exam as soon as they have met with their junior class dean in the fall to create their spring testing plan. Tests are given at convenient locations throughout the city, but the earlier students register the greater the chance of getting a first-choice location. Poly serves as a test location for some, but not all, of the dates each year.

Questions about taking the SAT at Poly’s testing location should be directed to the testing coordinator. More specific questions about the exam should be directed to the respective grade-level deans.

**ACT**

The American College Test (ACT) is the other exam for college admissions and is a viable option for Poly students. It may be taken as an alternative to the SAT and, in some cases, the SAT Subject Tests as well. The ACT is designed to measure general educational development; the scores reflect both a student’s aptitude and generalized achievements. Tests include English, mathematics, social studies, reading, and natural sciences. Students also have the option of taking a writing section; Poly students who sit for the ACT are strongly advised to take this section of the exam as many colleges and universities will require it.

All colleges and universities will accept the ACT in lieu of the SAT. Some institutions will even accept the ACT in place of both the SAT and SAT Subject Test requirements.

Registration for the ACT is handled in a manner similar to registration for the College Board tests (SAT and SAT Subject Tests). All registration material is available online at www.actstudent.org.

**SAT Subject Tests**

In contrast to the SAT, which is meant to test reasoning skills, the SAT Subject Tests are one-hour examinations designed to measure a student’s specific knowledge in a certain subject area. The subject tests fall into five subject areas: English, history, mathematics, science, and languages. Because these tests are designed to measure knowledge in a specific subject area, it makes most sense to take the test(s) as close as possible to the completion of the associated course. Most students will take these exams in May and/or June of the junior year, although some exams, like Latin, are offered only one time each year. Some students in chemistry and the accelerated math courses may take these exams in June of sophomore year. Sophomores and juniors are encouraged to consult with their grade-level dean, college counselor, and/or classroom teacher for questions regarding specific SAT Subject Tests. For a list of exams, and to find out when they are offered, visit www.collegeboard.com.

Just as with the SAT, students must register on their own to take the SAT Subject Tests. [Refer to the SAT section above for registration details.] Please note that it is not possible to take both the SAT and SAT Subject Tests on the same day. A student may, however, take up to three SAT Subject Tests on the same day.

**Advanced Placement exams**

The AP program gives students an opportunity to take college-level courses while they are still in high school and, in some cases, to earn credit and/or Advanced Placement standing for college. While AP exams were never intended to be used in college admission, they have become increasingly important in this process and are in fact used in admissions decisions at many international universities, particularly those in the United Kingdom. Students and families should be aware that college and university policies concerning credit for AP scores vary from institution to institution and, in some cases, from year to year. Ultimately, Advanced Placement courses are widely considered to be the most rigorous courses offered at the high school level and are viewed as such in the college admission process.

Polytechnic School offers 16 AP courses. When a student enrolls in an AP course, it is with the understanding that he or she is required to take the AP exam at the conclusion of the course. The AP exams are administered at Polytechnic School during a two-week period in early May; like the SAT and SAT Subject Tests, the schedule of exams is set by the College Board and is the same for students enrolled in high schools throughout the United States and in international schools.

Students are responsible for completing pre-registration materials for their AP exams in group meetings to be held in September with Poly’s AP coordinator. A student who is enrolled in an AP course is automatically signed up and billed for the AP exam in that subject. A student not enrolled in an AP course who would like to take the
corresponding AP exam (e.g., AP European History, AP Music Theory, etc.) will need to coordinate with the AP coordinator’s registration form and return it to the Upper School Office by Oct. 31.

**Test preparation programs**

The best preparation for standardized tests is rigorous course work completed over months and years, rather than a short-term crash course. Khan Academy has partnered with the College Board to provide complimentary and customized online SAT preparation for all students after they receive their PSAT results. Priorities in the fall of junior year should be on academic coursework, and students will have ample time to begin preparing for the spring administration of the ACT or SAT after midyear exams. Most Poly students continue to prepare over the summer between junior and senior year and sit for the SAT or ACT a second time in fall of their senior year.

For those students who choose to take a test prep course or to arrange for tutoring, grade-level deans can provide the contact information of programs and tutoring services that have helped Poly students in the past, though we cannot endorse any one particular service. Families are encouraged to look into more than one to compare services and costs and to make sure that the company or tutor is able to prepare a customized tutoring plan. Although some test prep companies may push students to start test preparation early and to be finished with testing by the end of junior year, we discourage this. In our experience, almost all Poly students test a second time in the fall of senior year, and the vast majority experience increases in their test scores during the fall of senior year.

We do not recommend that freshmen or sophomores enroll in formal PSAT preparation courses as the exam results will not be used for any college admission purpose. Freshmen and sophomores are better served focusing on their academic course work rather than test preparation.
IV. Course counseling and curriculum planning process

The course counseling process begins with an informational assembly followed by meetings with the advisor, grade-level dean, and, in some cases, other adults in the community to assist each student in determining the appropriate mix of courses. In deciding what commitments they plan to make for the year, students should carefully consider their personal priorities and values, time management skills, and long-term goals in addition to their course load and the sports and extracurricular activities they plan to pursue. Some CIF Varsity sports, major roles in dramatic productions, or a significant number of extracurricular activities inside and outside of school can cause severe demands on students’ time. An appropriate balance of activities and academics will provide students with a healthier lifestyle, a greater sense of personal confidence, and a more enjoyable high school experience overall.

Curriculum overview events

Upper School students currently in grades 9-11 will attend a course counseling assembly with grade-level breakout sessions toward the beginning of the second semester. Families of students currently in grades 9-11 are invited to attend a curriculum overview evening in February that incorporates information specific to each grade’s progress through the Upper School program. Families of current eighth-graders, both here at Poly and entering from elsewhere, are invited to an event in early April.

Course counseling meetings

Following the overview evenings and after reviewing the materials in this booklet with their parents or guardians, students in grades 9-11 will need to make arrangements to meet with their advisors. During these meetings, students will review their four-year academic plan, discuss their long-term goals, and discuss possible course options. Students should complete these appointments before spring break.

Once they have met with their advisors, students should complete a course request form and schedule an appointment with their current grade-level dean. These course-planning meetings typically do not include parents, although parents are encouraged to contact the appropriate grade-level dean if they have questions.

- Cynthia Crass, 9/10 dean, 626-396-6615, ccross@polytechnic.org
- Aquita Winslow, 9/10 dean, 626-396-6616, awinslow@polytechnic.org
- Eddie Pickett, 11/12 dean, 626-396-6623, epickett@polytechnic.org
- Mark Rasic, 11/12 dean, 626-396-6621, mrasic@polytechnic.org
- Garine Zetlian, 11/12 dean, 626-396-6660, gzetlian@polytechnic.org

In addition, juniors have separate family meetings with their college counselors. Course counseling will be a component of both meetings, and it is not important that they occur in any particular sequence.

During their meeting with grade-level deans, students will review their course request forms, confirm departmental approval for their preferred classes, and finalize their selections.

In late April and early May, students currently in eighth grade, both from Poly’s Middle School and new to the school, and their parents will meet with an Upper School dean to review their curricular plans. These meetings will be approximately half an hour in duration and can be scheduled through the Upper School Office starting in April. Students who are new to Poly will take math diagnostic tests and language placement tests in the end of April; they will designate preferences during their counseling meetings, but course placements will not be finalized until after the placement tests have been reviewed.

Course eligibility

Course requests will be reviewed by the deans, department chairs, dean of instruction, and Upper School director. Students and their families should be aware that students must meet the prerequisites for admission to next year’s course selections. A student who has been approved for a course that requires a minimum grade in the previous year’s course may lose that eligibility by finishing below the required threshold.

In some cases, a student’s end-of-year performance will necessitate a change in placement. Families will be notified in June about the resolution of placement issues.

In general, eligibility will be based on the following criteria:

- Listed prerequisites, including grade performance, departmental approval, instructor’s permission, and audition requirements.
Past record of effort and engagement in the relevant discipline.
Grades and grade-level dean’s approval based on overall record, planned schedule, and sports and extracurricular commitments.

Each department’s course eligibility criteria are communicated to students starting early in the third quarter. Additionally, students seeking permission to enroll in advanced courses should expect to have a conversation with their teacher during the spring semester to discuss their interest and review the approval criteria. If students have any questions about the eligibility process, they should speak with the relevant teacher or department chair.

Course changes
Once a student has been enrolled in a roster of courses for the coming year, changes can be made only through the grade-level dean or the Upper School director. Students who wish to drop or add a course or change a level should begin this process by contacting the grade-level dean. Students should not attempt to make changes directly through the scheduler.

Student-initiated changes may take place during the first three weeks of the semester. Thereafter, changes may be initiated only by the course instructor or the grade level dean. Course changes that occur after the close of the first quarter will be designated a “W” (for “withdrawn”) on the transcript. Students and their families should bear in mind that the course planning process is designed to ensure that students are appropriately placed. Prerequisite criteria, course eligibility, and recommendations are all provided to serve this objective. Changes requested subsequent to the deadlines set out in this Course of Study will be subject to scheduling constraints and section caps that exist to ensure the quality of experience for all students and equity among faculty members.

Important contacts
Listed below are contacts for the course planning process:

- Lisa Caragher, testing coordinator (non-AP), 626-396-6463, lcaragher@polytechnic.org
- Cynthia Crass, 9/10 dean, 626-396-6615, ccrass@polytechnic.org
- Jennifer Fleischer, Upper School director, 626-396-6601, jfleischer@polytechnic.org
- Paul Geisler, registrar, 626-396-6622, pgeisler@polytechnic.org
- J.D. Gladden, Upper School dean of instruction, 626-396-6606, jgladden@polytechnic.org
- Ryder Livingston, assistant to the Upper School director, 626-396-6602, rlivingston@polytechnic.org
- Eddie Pickett, 11/12 dean and college counselor, 626-396-6623, epickett@polytechnic.org
- Mark Rasic, 11/12 dean and college counselor, 626-396-6621, mrasic@polytechnic.org
- Chris Schmoke, dean of student life, 626-396-6612, cschmoke@polytechnic.org
- Laurianne Williams, dean of student activities/scheduler, 626-396-6674, lwilliams@polytechnic.org
- Aquita Winslow, 9/10 dean, 626-396-6616, awinslow@polytechnic.org
- Garine Zetlian, 11/12 dean and college counselor, 626-396-6660, gzetlian@polytechnic.org