

Caltech

**Information for Advisors of Upper-Class Students
2016-17**

**INFORMATION FOR ADVISORS OF UPPER- CLASS
STUDENTS**

2016-17

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Compiled by the

DEAN'S OFFICE

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CALTECH

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Much of the information in this handbook has been taken from the Caltech catalog, which can be consulted for more details.

GENERAL INFORMATION

Permanent advisors in a student's option are assigned at the end of freshman year. Before that, freshmen are advised in groups of about seven students each by special faculty advisors who are assigned randomly without regard to academic interest. So you may be your advisee's first advisor who is knowledgeable about his or her choice of option.

Every upper-class student is required to meet with their advisor in person at least once each academic year prior to the start of spring term. Of course, many students will benefit from more meetings; the once-a-year meeting requirement just establishes a minimum. For those advisors wishing to institute regular meetings with their advisees, the third week of each term is a good time to check how the term is starting out. Note that Add Day each term is the Friday of the third week. A meeting in the seventh week should be late enough for advisors to have received midterm deficiency notices, and this week is also just before Drop Day and also prior to when the registration period for the following term opens. A list of important dates during the year begins on page 42 of this handbook.

At a recent Student-Faculty Conference, a committee on academic advising presented a list of ideal advisor characteristics:

- Is approachable
- Communicates availability and expectations to advisees
- Is flexible and sensitive to students' needs
- Meets with advisees outside of the office at least once a year
- Provides academic and research guidance (is familiar with undergraduate courses within the option, is willing to discuss problems the student is having, can discuss the pros and cons of choices such as overloading)
- Is familiar with the counseling center and is comfortable referring students when appropriate
- Is a resource for students interested in graduate school

- Knows advisees well enough to write them recommendation letters.

Conscientious advisors respond whenever possible when their advisees try to contact them, such as by e-mail, even if it is just to say they are out of town.

The Student-Faculty Conference committee recognized that an advisee has responsibilities also, which include:

- Makes a reasonable attempt to seek out his or her advisor
- Does not wait to the last minute before looking for the advisor, for example, to obtain a signature
- Communicates expectations and needs to the advisor
- Is responsive to the advisor's efforts
- Keeps advisor informed of academic progress and long-term goals.

Advisees should come prepared for each meeting.

Counseling

Ideally, advisors should discuss their advisees' academic and personal goals as well as related non-academic issues. Try to establish relationships with your advisees so they feel comfortable seeking your advice and come to you for more than signing their add/drop cards. You can be not only a source of information but also one of inspiration for your advisees. It will help students if you establish and post regular office hours or make alternative arrangements for the students to find you when needed.

Occasionally, a student will not find Caltech to be a good match for their abilities or interests. In such a case, transferring to another school may be the best option during or just after the freshman year, before a poor academic record is acquired, but sometimes this can happen later. The deans have experience in helping students with transfer decisions.

If students have questions that you cannot answer, refer them to one of the counseling resources or offices from the lists beginning on pages 40 and 51, respectively.

Advisors can be an important part of the Caltech safety net by being tuned in to their advisees' mental health. Important information is provided on the Counseling Center's website at www.counseling.caltech.edu, especially the suicide/depression link and the other links on various types of mental disorders. See also the information on the Health and Counseling Center on pages 40 and 51.

Academic Oversight

As an advisor, you evaluate the course selections your advisees propose, taking their academic performance into consideration. Unless done electronically through REGIS, your signature will be required on registration cards, add/drop cards, and petitions (typically reinstatement requests, overloads, or undergraduate student sabbaticals).

If you will be away for an extended period or if you will not be available around Add Day and/or Drop Day, please let the deans know by calling x6351 or emailing us at barbarag@caltech.edu. The deans will be happy to notify your advisees of your schedule, so they can see you before you leave. This notification may prevent students from waiting until the last minute and having no alternative but to get a dean's signature instead of yours. The deans and the registrar are making a special effort to encourage students to see their advisors. You can also send an e-mail to all of your advisees as a group through REGIS, such as to inform them you will be away from campus.

Midterm deficiency notices for your advisees will be emailed to you after midterm exams and before Drop Day. Review them and follow up quickly with advisees who are doing poorly. It is important to do this in a timely manner so the students have a chance to take appropriate measures, including possibly dropping a class by the deadline. Ask each advisee to make an appointment to discuss difficulties as they arise, rather than waiting for you to contact them.

A student who is having trouble in a class should be asked whether he or she attends class, visits the teaching assistants during office hours, and participates in a study group. Encourage the student to meet directly with the instructor for advice. The Deans Office offers a tutoring program that is free to the student being tutored, and the tutor is paid from office funds. A student needing a tutor may suggest one or pick from a list of volunteers. If a class has no volunteers signed up, the deans will try and find a suitable tutor.

If a student needs extra time to finish an assignment in a class, he or she should approach the instructor or head teaching assistant for an extension. Most classes have extension policies, and some classes have one free extension per term. The deans are always willing to talk to students about extensions, but do not have the power to grant them. In certain cases, such as illness or the student being away for a significant period of time representing the Institute in some worthwhile capacity, the deans will write a recommendation that an extension be given. See the dean's website for their policy on providing recommendations for extensions.

Students whose grades make them academically ineligible may petition the deans for initial reinstatement and must petition the Undergraduate Academic Standards and Honors Committee (UASH) for subsequent reinstatements. For your information, eligibility requirements are listed beginning on page 31.

THE DEAN'S OFFICE

The Dean of Undergraduate Students is Kevin Gilmartin, and the Associate Deans are Barbara Green (barbarag@caltech.edu) and Lesley Nye (lnye@caltech.edu). The deans can be reached by phone at x6351. The Dean's Office is located in room 210 of the Center for Student Services. Beth Larranaga (rosel@caltech.edu) is the office administrator. Although the Dean's Office is mentioned frequently in this handbook, here is a concise list of the roles of the deans that may be of interest to upper-class advisors.

In assisting students with their academic work, the deans provide advice, recommend extensions and incompletes if conditions warrant, help with UASH petitions, approve leaves and reinstatements, approve underload and overload petitions, identify students with mental health issues, make referrals to the Counseling Center, meet with students on a regular basis when necessary, arrange for accommodations for students with disabilities, provide free tutors, act as a liaison between students and faculty, and intervene with faculty on students' behalf. The deans also sign for the advisors when they are not available, provide loans or grants to students in emergency situations, approve requests from close-to-finishing students to march in commencement, and interface with the Housing Office to accommodate students with special housing needs. The deans are responsible for student discipline, and they deal with academic violations of the honor code as well as non-academic behavioral issues such as violations of the alcohol and fire policies. Funds administered by the deans provide opportunities for summer research for female students off campus and a variety of scholarly activities for all students through the Housner Fund. The deans serve as a resource for advisors, to which this handbook is intended to be an important contribution.

CORE INSTITUTE REQUIREMENTS

A Caltech education requires not just depth of an option, but also considerable breadth in basic science, humanities, and social science. Caltech's core curriculum prepares students for the interdisciplinary nature of contemporary research in science and technology. This encourages a culture of problem solving, collaboration, and communication while providing valuable experience in all fields of science. Significant study in the humanities and social sciences is an important component of Caltech's core curriculum, giving alumni the ability to navigate the societal, political, and economic factors that influence, and are influenced by, their work.

The following core requirements are from the 2016-17 catalog. Under normal circumstances the core and optimum requirements are those stated in the catalog published in the first year of a student's enrollment at Caltech.

<i>Course</i>	<i>Units</i>
Freshman Mathematics (Ma 1 abc)	27
Freshman Physics (Ph 1 abc)	27
Freshman Chemistry (Ch 1 ab)	15
Freshman Biology (Bi 1 or Bi 1 x) ¹	9
Menu Class (currently Ay 1, Ch/APh 2, ESE 1, EST 2, Ge or IST 4)	9
Freshman Chemistry Laboratory (Ch 3 a or Ch 3 x) ²	6
Additional Introductory Laboratory	6
Scientific Writing ³	3
Humanities Courses	36
Social Sciences Courses	36
Additional Humanities and Social Sciences Courses	36
Physical Education	9

¹*Bi 8 or Bi 9 are acceptable alternatives to Bi 1 or Bi 1 x for students with a strong background in biology. Students who earned a 5 on the AP biology exam may also petition the biology option representative to take a higher-level biology course of nine or more units, on grades, to fulfill the biology core requirement. Acceptable substitutions are: Bi/Ch 110, Bi 114, Bi 117,*

Bi 145a, Bi 145b and Bi/CNS/NB 150. Instructor permission, communicate to the option representative prior to registration is required. Note that this course cannot be used to fulfill another requirement.

²*This requirement can also be met by completing Ch 3x, Ch 4a, Ch 8 or Ch/ChE 9.*

³*This requirement can be met either by taking a course approved by the student's option to satisfy the requirement, or En/Wr 84. This course must be taken on grades.*

Menu Classes

Menu classes are specifically designed for breadth. The intent of the menu class requirement is to introduce students to a subject that they did not plan to study. In many cases, it is the only class in that subject they ever take; in other cases, they may decide to take more classes in that subject as a result. Students cannot take a menu class in a subject that they have already taken classes in or that is in their current option. This requirement must be completed by the end of sophomore year.

Classes to satisfy the menu requirement are Ay 1 (*The Evolving Universe*), Ch/APh 2 (*Introduction to Energy Sciences*), ESE 1 (*Introduction to Environmental Science and Engineering*), EST 2 (*Energy and Society*), Ge 1 (*Earth and Environment*), and IST 4 (*Information and Logic*). These classes are all 9 units and are taught in the 3rd term.

Introductory Laboratory Requirement

All students are required to take at least 12 units of laboratory work in experimental science during their freshman and sophomore years. Ch 3 a or Ch 3 x (6 units) shall be taken during the freshman year, although this requirement can also be satisfied with Ch 4 a, Ch 8 or Ch/ChE 9. The Additional Introductory Laboratory requirement is 6 units chosen from APh/EE 9 a (*Solid-State Electronics for Integrated Circuits*, 6 units, 1st term), APh 24 (*Introductory Modern Optics Laboratory*, 6 units, 3rd term), Bi 10 (*Cell Biology Laboratory*, 6 units, 3rd term), Ch 4 ab (*Synthesis and Analysis of Organic and Inorganic Compounds*, 9 units per

term, 2nd term for part a, 3rd term for part b), Ch 8 (*Experimental Procedures of Synthetic Chemistry*, 9 units, 1st term), Ch/ChE 9 (*Chemical Synthesis and Characterization for Chemical Engineering*, 9 units, 3rd term), EE/ME 7 (*Introduction to Mechatronics*, 6 units, 2nd term), Ge 116 (*Analytical Techniques Laboratory*, 6 units, 2nd term), Ph 3 (*Physics Laboratory*, 6 units, 1st, 2nd or 3rd terms), Ph 5 (*Physics Laboratory [electronics]*, 9 units, 1st term), Ph 8 bc (*Experiments in Electromagnetism*, 3 units per term, 2nd term for part b, 3rd term for part c), or a more advanced laboratory. Computational laboratory courses may not be used to satisfy this requirement.

Humanities and Social Sciences Requirement

All students must complete 108 units in the Division of the Humanities and Social Sciences. Of these, 36 must be in the humanities and 36 in the social sciences, in each case divided equally between introductory and advanced courses. The remaining 36 may be drawn from humanities and social sciences, including HSS tutorial courses and 9 unit of either Wr1 or Wr2. They may not include BEM102. As humanities and social science courses are 9 units each, the 108-unit requirement averages to one course per term over four years. Students entering in 2011-2012 and later must take their Adv Humanities, and Adv Social Science Courses on grades in order to fulfill the requirement.

Entering freshmen are required to take two terms of freshman humanities; that is, humanities courses numbered 50 or below in the Caltech catalog. Successful completion of two terms of freshman humanities is a prerequisite for all other humanities courses, except for foreign languages. It is not a prerequisite, however, for introductory social sciences courses. The freshman humanities classes may be taken in any two terms of the freshman year.

To encourage breadth, students will have to take their two freshman humanities classes in different disciplines chosen from English, history, philosophy and film. No more than 18 units of

freshman humanities may be counted toward the 108-unit requirement.

While beginning, intermediate and advanced language courses do not count toward the 36-unit humanities requirement, every term receives credit toward the final 36 units of the 108-unit requirement in HSS, except for courses in a student's native language.

Since writing is an important method for developing and sharing ideas, all freshman humanities courses and other humanities courses numbered above 90, with the exception of some foreign languages and courses numbered between 29 and 90, require at least 4,000 words of composition. Instructors give extensive feedback on written work and help students improve their prose. As entering students may not be fully prepared for the writing in freshman humanities, all freshmen and transfer students take a writing assessment before the beginning of the fall term. On the basis of this assessment, some students may be required to pass Wr1, 2, 3, 4 and/or 50 before entering freshman or advanced humanities classes.

At the discretion of the instructor, students in freshman humanities who do not meet expectations for writing may be required to seek additional instruction in consultation with the Hixon Writing Center, or to pass Wr 1, 2 and/or 3, or another suitable composition class, before continuing with their freshman or advanced humanities classes.

The 36 units of required social science courses consist of 18 units of introductory social science courses in different subjects and 18 units of related advanced undergraduate social science courses. The following list contains the introductory social science courses: An 22 (*Introduction to Sociocultural Anthropology*, 9 units, 1st and 2nd terms), An 23 (*Human Evolution*, 9 units, by announcement), Ec 11 (*Introduction to Economics*, 9 units, 1st or 2nd terms), PS 12 (*Introduction to Political Science*, 9 units, 1st or 3rd terms), Psy 13 (*Introduction to Cognitive Neuroscience*, 9 units, 3rd term). The

advanced social science courses must be numbered 100 or above and must be taken subsequent to at least one related introductory social science course according to:

- Anthropology for An 22 or 23
- Economics or BEM (except BEM 102) for Ec 11
- Political science for PS 12
- Psychology for Psy 13

For example, a student who has taken An 22 and Ec 11 may use 18 units of advanced anthropology, or 18 units of advanced economics, or 9 units of advanced anthropology and 9 units of advanced economics to fulfill the advanced social science requirement.

Included in the 12 humanities and Social Science courses, students must take at least 3 writing – intensive courses and these must be taken on grades. The graded advanced humanities courses count towards this total. A student can select another course from advanced humanities or a social science course with writing content (specifically Ec 105, Ec 129, Ec 130, Ec 140, PS 99ab, PS 120 or PS 141). These three writing – intensive courses should be spread out over the student’s sophomore, junior and senior years.

See the Caltech catalog for more details on the humanities and social sciences requirement.

Scientific writing requirement

Every student must complete the scientific writing requirement as well as one on oral communication. The course used to satisfy the writing requirement must be taken on grades. The following table shows the courses that cover these two requirements in the various options.

<i>Options</i>	<i>Writing Req.</i>	<i>Oral Req.</i>
ACM, APh, BE, CNS, CS, EE, EAS, ME	E 11	E 10

Ay	Ay 31	Ay 30
Bi	Bi/BE24 for both	
BEM, Ec, PS	En/Wr 84 for both	
ChE	Ch/ChE 91	ChE 126
Ch	Ch/ChE 91	Ch 90
En, H, HPS, Pl	En /Wr 84 for both	
GPS options	Ge 13	Ge 109
Ma	Ma 11	Ma 10
Ph	Ph 70 for both	

En/Wr 84 (*Writing Science*) is 9 units; all of the other courses total 6 units for both requirements. En/Wr 84 can also be taken by a student in any option to satisfy the writing requirement; the option should be contacted to determine if En/Wr 84 can also satisfy the oral communication requirement. The scientific writing requirement may also be satisfied, at the discretion of the option, by three units of extra work on a senior thesis focused on written scientific communication.

Physical education

PE classes are 3 units each, and three are required as part of the core, which can be completed any time before graduation. Each of Caltech's NCAA intercollegiate athletic teams has a corresponding PE class, and students can get credit for participating on a team by enrolling. A maximum of six PE units per term can be counted toward graduation requirements, up to a total of 36 units.

SPECIFIC INFORMATION FOR ADVISORS

The registrar's office is room 125 in the Center for Student Services and may be reached by phone at x6354. The primary contact for undergraduate matters is Gloria Brewster (x6355, ghb@caltech.edu). The registrar's website at www.registrar.caltech.edu contains the course schedule (day, time, location, grade scheme, etc. of every course offered) for the current and prior terms, the list of option representatives, the academic calendar, religious holiday calendar, master schedule for core classes and large classes, UASH information and petition forms, and the Advising Arena. Within the Advising Arena, you will find sections on roles and responsibilities of advisors and advisees, FAQs, and links to useful resources.

The registrar's information system, REGIS, can be accessed from the registrar's website or directly through www.access.caltech.edu.

Within REGIS you will find a list of your advisees under the My Advisees link. From there you can e-mail your advisees, generate transcripts and degree audits, record private advising notes per advisee that can be referenced later on, and place advising holds on students which would prevent them from registering for courses during open enrollment periods. Clicking on the student's name during an open registration period will bring you to their class schedule where you can approve it or request a meeting with the student. Also, through the My Advisees link an advisor can notify the registrar that the required annual meeting with each advisee has taken place.

The Caltech catalog contains much information, including option requirements and course descriptions. The catalog can be accessed on line at the registrar's website.

Caltech courses are assigned a certain number of units, which nominally corresponds to the number of hours per week required inside and outside of class. For example, a 9-unit class typically has three lecture hours per week and 6 hours of work outside of

class. It is not uncommon for a course to be “under-untitled”, a situation in which a class takes more hours per week than the assigned number of units.

Grade point average (GPA) is a numerical average computed by weighting the grades by the number of units in a class, the letter grades being replaced by numerical values as follows: A+ = $4\frac{1}{3}$; A = 4; A- = $3\frac{2}{3}$; B+ = $3\frac{1}{3}$, D = 1; F = 0. There is no grade of D-. A transcript shows GPA for each term and cumulative GPA. P and F grades in pass/fail classes are not used in computing GPA. A passing grade in a pass/fail course is given if the student would have earned a D or better on the letter grade system.

There are three types of upper-class Caltech students depending on how they were admitted to Caltech. In addition to those who matriculated to Caltech as freshmen, some transfer in as upper-class students, having been admitted through the transfer admissions process, and some are admitted under the 3/2 dual degree plan after having spent three years at one of 13 participating liberal arts colleges. To graduate, all transfer and 3/2 students must meet the minimum Caltech degree requirements, spend at least 6 terms in residence, and complete at least 216 units at Caltech. When they arrive in the fall, transfer students go through a process that awards credit for their previous work, and determines what requirements have been satisfied. The 3/2 students are credited with having satisfied the core, including the 12 humanities and social science courses and the three PE classes, but not including the scientific writing requirement. This amounts to 216 units. A fourth type of upper-class student who is assigned an adviser is a student visiting from another university, who would typically be here for a year taking classes and/or doing research.

Every option has a faculty member in charge of student matters, called the option representative. These persons are listed in this handbook beginning on page 45. The option representatives assign the advisors for upper-class students, handle option-related petitions, approve second majors in the option and change of

option requests, approve transfer course credit, and are a source for general information about the option.

UASH stands for the Undergraduate Academic Standards and Honors committee and is comprised of faculty members and students, with the deans and the registrar as ex officio members. The major duties of UASH are to act on petitions, but it also selects students as recipients of some prizes and recommends students for graduation with honor to the faculty. UASH generally meets three times per term, once in the first week followed by a second meeting to hear appeals, and then a third time in the final week of a term.

The types of petitions on which UASH acts are late add and drop, reinstatement, appeal of a UASH denial of reinstatement, change of grade, additional E grade (above the six allowed), and further work (if more than 12 terms in residence are needed to complete the Bachelor of Science degree). Forms for these petitions, as well as the advisor's comment form, are available from the registrar and the registrar's website. It is Caltech policy that an F can be changed to a passing grade only on the basis of error, and UASH takes appropriate latitude in interpreting this rule. UASH approves late adds and drops only under extenuating circumstances. A course that is late dropped successfully will still appear on the transcript, but with a W (signifying withdrawn) as a grade. Courses will be expunged from the transcript only in exceptional circumstances. A W grade is not used in computing GPA.

To graduate with the degree of Bachelor of Science, students must pass all required courses, achieve a cumulative GPA of 1.9, and satisfy any additional requirements imposed by the options. Any student can follow the catalog in effect at the time of their first enrollment, or a more recent edition.

The status of graduation with honor is conferred by the faculty upon recommendation by UASH. Eligible students are those who have achieved a cumulative GPA of 3.5 or who have been recommended to UASH by a faculty member, option or division

on the basis of having carried out creative research of high quality. Students in the latter category generally have a GPA of at least 3.3. Starting with the class that enters in 2013-2014, honor at graduation will no longer awarded.

Core institute requirements cannot be dropped except with the approval of the deans. Freshmen humanities courses must be completed freshman year, or possibly sophomore year if the student is required to take Wr 1, 2, and/or 3. Postponing course work in humanities and social sciences often leads to trouble, particularly for students with a poor command of English.

Core requirements should be completed by the end of sophomore year, except that students generally take all four years to finish the 12 humanities and social science courses, and the PE and scientific writing requirements may be completed after the sophomore year. Advisors should not approve any registration in which a student tries to put off core classes beyond the time they are supposed to be taken. In the past, some students delayed the freshman chemistry lab requirement as long as possible, but recently the class has been made less onerous.

Some upper-class students who are still experimenting with a major may want to take one of the following frontier (“pizza”) courses: BE 1 (*Frontiers in Bioengineering*, 1 unit, 2nd term), Bi 2 (*Current Research in Biology*, 3 units, 1st term), Ch 10 ab (*Frontiers in Chemistry*, 3 units per term, 1st and 2nd terms), ChE 10 (*Introduction to Chemical Engineering*, 3 units, 2nd term), CS 9 (*Introduction to Computer Science Research*, 1 unit, 1st term), E 2 (*Frontiers in Engineering and Applied Science*, 1 unit, 1st term), EE 1 (*Introduction to Electrical Engineering Seminar*, 1 unit, 2nd term), Ge 10 (*Frontiers in Geological and Planetary Sciences*, 2 units, 2nd term), Ph 10 (*Frontiers in Physics*, 3 units, 1st term), Ma 20 (*Frontiers in Mathematics* 1 unit, 1st term). Core menu classes can also be taken as electives.

Students can receive extra help with writing through the Hixon Writing Center. Contact Suzanne Hall, Director, at x1738.

If a student feels that a course grade has been given unfairly, he or she should be advised to seek an explanation from the instructor or teaching assistant. If after doing so the student still feels the grade is unfair, a procedure described in the catalog can be followed. This procedure involves an academic mediator, appointed by the provost, and should be initiated before the end of the term following the term when the disputed grade was issued.

Caltech complies with laws to ensure equal opportunity for qualified students with disabilities. Such cases should be referred to the deans who will investigate to determine if accommodations are warranted. An example of an accommodation is allowance of extra time on exams for a student with attention deficit disorder.

Students in need of short-term financial assistance can see the deans about a no-interest loan or discuss a loan with the Financial Aid Office (see pages 41 and 50). The deans also have access to emergency funds that can, for example, pay for a trip home in case of a family emergency or pay for a medical procedure not covered by insurance. These funds are provided as grants, not loans, and are intended for students who lack adequate financial resources.

Advisors should be aware that some students work at jobs on campus during the year, either to earn extra money or as the work-study part of financial aid. The Career Development Center (see pages 40 and 49) has information about available jobs on campus.

Students who do not complete graduation requirements in the spring term of their senior year may still be able to march in commencement if they are within about 36 units of finishing. Such students who wish to march should write to the dean of students with a list of their uncompleted requirements and a plan to finish. An approved student will be allowed to march, and his or her name will be listed in the commencement program, but with an asterisk indicating that the student is close to finishing.

A student who wishes to change advisors should fill out the request form (obtained from the registrar or the registrar's website) and

submit it to the registrar. A student may request a specific new advisor or leave the choice up to the option representative.

REGISTRATION INFORMATION

Students register via REGIS. Advisors will be notified by e-mail, and then they can log on and approve or request a meeting with the student. Advisors should have previously met with their advisees to discuss course selection.

Any undergraduate with an outstanding Bursar's bill balance of \$300 or more will be prevented from registering until the bill has been paid or a payment plan has been worked out with the Bursar. Any student who has not registered within one week of the first day of classes may be considered to have withdrawn. Students who register late may be subject to a late registration fee.

Adding and dropping classes in any term must be completed by the respective add and drop dates; refer to the calendar starting on page 42. Changes are entered on a yellow add/drop card obtained from the registrar, which always needs the advisor's signature. The instructor's signature should be obtained when adding a class, especially for those classes with limited seating (see listing in REGIS). When dropping a class, the instructor's signature is required after Add Day. Adding a class with a time conflict with another class utilizes an orange card, which requires signatures of the advisor and both instructors. Add/drop cards are available from the registrar.

The minimum course load is 36 units per term and the maximum course load for an upper-class student is 48 units per term. Students may take up to 51 units but it requires their adviser's approval for such an overload. For reference, students need to average 40.5 units a term to graduate in four years. To take fewer than 36 units, a student must have an underload petition approved by the deans, and to take more than 51 units, an overload petition must be supported by the advisor and approved by the deans. Deadlines for approving overload and underload petitions are Add Day and Drop Day of a term, respectively, so petitions should be submitted in advance of these dates. For a senior whose course plan leads to a June graduation without an overload in any

remaining term, an underload petition need only be submitted to the advisor and registrar for approval. Forms for overloads and underloads are available from the registrar, registrar's website, and the deans.

A student who underloads should consult with the Financial Aid Office (see pages 41 and 49) to see if any adjustments in his or her financial aid are triggered. A student whose underload is approved by Add Day is charged a prorated amount of tuition and fees based on 36 units being a full load if they entered before academic year 2012-2013.

In each term after the second term of freshman year, a student may elect to take up to two elective courses on a pass/fail basis provided the courses are not designated as "letter grades only" and are not specifically required for the degree in his or her option. Courses only graded pass/fail do not count toward this total. No more than 90 of the units used to satisfy the requirements for the Bachelor of Science degree may be in courses graded pass/fail because of the student's election.

Some courses may be taken either for a letter grade or pass/fail. A student who wishes to change the grading scheme from letter to pass/fail or from pass/fail to letter should make the appropriate designations on the add/drop card, obtain the advisor's and instructor's signatures, and file the card with the registrar by Drop Day.

Attempts to change registration after the deadlines must be made via petition to UASH. A petition process is also required for students who need more than 12 terms in residence to complete their degree.

No limitations exist on how many PA (performance and activities) classes can be taken in a term or counted toward degree requirements, as long as the requirements of an option are met. PA classes include music, theater, visual arts, student publications, cooking basics, student-taught courses, and a few others.

Summer registration for up to 18 units is possible for reading or research activity with approval of the student's option. No tuition is charged. A maximum of 36 units obtained in this way can be counted toward graduation requirements. An undergraduate student cannot receive payment for research carried out for academic credit.

COURSEWORK TAKEN OFF CAMPUS

Many upper-class students participate in the study abroad program and take and receive credit for courses at participating universities overseas. See the Fellowships Advising and Study Abroad office (pages 41 and 49).

Upper-class students can also participate in exchange programs with Occidental College and Art Center College of Design, receiving credit for courses taken at those two locations. No extra tuition is charged, although the student may have to pay special fees. Approvals are needed from the instructor of the course at Occidental or Art Center, the student's option representative at Caltech, the Caltech option closest to the subject of the course, and Caltech's registrar. Approval forms are available from the registrar and the registrar's website.

Except for credit received from the study abroad program and exchange courses at Occidental College and Art Center College of Design, and except for credit awarded to transfer and 3/2 students for their previous coursework, students should mainly fulfill Caltech course requirements by taking courses at Caltech. However, if circumstances warrant, credit for college courses taken at other schools can be obtained and counted toward graduation here. Approval for a specific course taken elsewhere should be obtained in advance by the Caltech option representative in the option in which the credit is desired; this is especially true for courses in the humanities and social sciences. After a course has been completed, the allowance of credit form (obtained from the Caltech Registrar) should be returned to the Registrar's Office with the required signatures, along with a transcript from the other school. This process includes a determination of the number of units to be awarded. Situations that warrant taking courses at another college for transfer could include: if UASH requires a student to complete courses while on leave as a condition to regain eligibility, if a senior has to drop a required course that is not reoffered here before graduation, or if a

student is only lacking a course or two to graduate and finds it impractical to return to campus.

Although no transfer of credit is involved, Caltech students can enroll in Air Force or Army ROTC programs at nearby colleges, such as USC. Completion of these multi-year programs leads to a commission as second lieutenant.

MAJORS AND MINORS

Caltech offers 25 options in which a student can major: **applied and computational mathematics, applied physics, astrophysics, bioengineering, biology, business economics and management, chemical engineering** (with a required track in either biomolecular engineering, environmental engineering, process systems, or materials), **chemistry, computer science, economics, electrical engineering, engineering and applied science** (with a required concentration in computation and neural systems, and material science, or a student-proposed concentration), **English, geology, geobiology, geochemistry, geophysics, history, history and philosophy of science, mathematics, mechanical engineering, philosophy, physics, planetary science, and political science**. In addition, there is an **interdisciplinary studies program**. See the catalog for details on all of the options.

Students may also take a minor program in eight subjects: **aerospace engineering, control and dynamical systems, computer science, English, environmental science and engineering, geological and planetary sciences, history, history and philosophy of science, philosophy, and structural mechanics**. A student wishing to add a minor must obtain approval by the option representatives of both the major and minor areas and submit the approved plan to the registrar before the start of the senior year. The plan of study must meet the minimum requirements of both the major and minor areas, but the option representatives may impose additional requirements as well. A second advisor for the minor will be assigned to the student; for humanities, this will be the option representative. In 2016, 31 students graduated with a minor.

A double major for the Bachelor of Science degree is also possible. Option representatives from the two options must approve the plan of study, which must lead to completion of the degree in four years. The plan must meet the minimum requirements of both options, but the option representatives may impose additional requirements as well, such as to avoid excessive double counting

of units. The approved plan should be submitted to the registrar during the sophomore year, but in no case later than the start of the senior year. Two advisors, one in each option, will be assigned to the student. Certain pairs of options that are deemed to be too close in subject matter will not be approved for a double major. The registrar has information on what combinations have been allowed in the past. In 2016, 36 students graduated with a double major; the most popular second major was Business Economics and Management (15 students).

A list of all major and minor option representatives begins on page 45.

A student in good standing may change options provided he or she has a GPA of 1.9 in a set of subjects designated by the new option or the permission of the representative of the new option. Once the change is approved, the student will be assigned an advisor in the new option.

Forms for adding a second option or a minor and for change of option can be obtained from the registrar or the registrar's web site.

A student whose GPA falls below 1.9 at the end of an academic year in a set of subjects designated by the option may be refused permission to continue in that option. In this case, such students will either have to take additional courses to raise their GPA or find a new option. Students without an option are placed under the jurisdiction of the dean of students, and can remain so for no more than one year.

OPTION SPECIFIC INFORMATION

Section Three of the Caltech catalog contains detailed information on the requirements of each option, including both as a major and as a minor. For each option, the material provided in the catalog typically includes an introduction to the subject, the course requirements, a suggested schedule for sophomore, junior and senior years, and a list of suggested electives. As an example, the catalog section on the applied physics is reproduced below.

Applied Physics Option

The applied physics option is designed to extend knowledge of the principles of pure physics to the development of new technologies.....*introductory material continues in the catalog.....*

Option Requirements

1. E 10 and E 11. E 11 can be satisfied by three units of additional work associated with the senior thesis (APh 78 or 79), or by taking Ph70, En 84, Bi24.
2. Any three of the following: APh/EE 9 b, APh 24, Ph 3, Ph 5, Ph 6, or Ph 7.
3. Ph 12 abc, APh 17 ab or APh 105 ab, Ph 106 abc, and Ph 125 ab or Ch 125 ab.
4. Ma 2, Ma 3, and ACM 95 abc.
5. Either APh 78 abc, or one term of APh 77 and one term of any of the following: APh 77, Ph 77, EE 91, Ch 6, Ae/APh 104 bc, and MS 90. Any substitutions or additions require prior approval of the option representative.
6. One additional advanced sequence of APh courses numbered over 100, such as: APh 101 abc, APh/MS 105 abc, 114 abc, APh/Ph 115 and APh/Ph/Ae 116, APh/EE 130, 131, and 132, APh 156 abc, or BE/APh 161 and 162. Note that APh 100 and APh 200 do not satisfy this requirement. Any substitutions or additions require prior approval of the option representative.

7. Passing grades must be earned in a total of 486 units, including the courses listed above. No course in fulfillment of option requirements may be taken on a pass/fail basis.
8. Any student whose grade-point average is less than 1.9 at the end of the academic year in the subjects listed above may be refused permission to continue work in this option.

Graduation Requirements/Applied Physics

Typical Course Schedule

		<i>Units per term</i>		
		<i>1st</i>	<i>2nd</i>	<i>3rd</i>
<i>Second Year</i>				
Ph 12 abc	Sophomore Physics	9	9	9
Ma 2 and 3	Sophomore Mathematics	9	9	0
ACM 95 abc	Intro. Methods of Applied Math	12	12	12
	HSS Electives	9	9	9
	Laboratory electives	6	6	6
	Other elective	<u>0</u>	<u>0</u>	<u>9</u>
		45	45	45
<i>Third Year</i>				
Ph 125 ab	Quantum Mechanics	9	9	0
APh 110 ab	Topics in Applied Physics	2	2	0
APh 17 ab	Thermodynamics and Stat. Mech	9	9	0
Ph 106 abc	Topics in Classical Physics	9	9	9
	HSS Electives	9	9	9
	Other electives	<u>9</u>	<u>9</u>	<u>27</u>
		47	47	45
<i>Fourth Year</i>				
APh 78 abc or APh 77	Senior Thesis, Experimental ¹	9	9	9
	Laboratory in Applied Physics ³	-	9	9
	Advanced Elective ²			
	HSS Electives	9	9	9
	Other electives inc APh 100	<u>27</u>	<u>18</u>	<u>18</u>
		45	45	45

¹ See item 2, option requirements.

² See item 6, option requirements.

³ See item 5, option requirements.

Suggested Electives

Students are encouraged to obtain a well-rounded course of study pursuant to the B.S. degree in applied physics. The option representative and/or undergraduate adviser will gladly assist students in choosing appropriate elective courses. Students ultimately interested in pursuing an advanced degree in applied physics or related fields are encouraged to complete a senior thesis project through APh 78 or 79.

ELIGIBILITY FOR REGISTRATION

Following the first two terms, which are taken on a pass-fail basis, freshmen will be ineligible to register if they failed to pass at least 27 units in the previous term. After the first two terms of study, all undergraduate students must complete a minimum of 27 units with a grade-point average of at least 1.9 in order to remain eligible to register for classes. In addition, students must earn an average of 36 units per term over each academic year (or three trailing terms if students were not in attendance for the entire academic year) for a total of 108 units. A student may be excused from the 27-unit eligibility requirement if the requisite petition has been approved, prior to Add Day, by the Dean or Associate Dean of Undergraduate Students. Under exceptional circumstances the deans may waive the requirement that such a petition be approved prior to Add Day, but may do so only once during that student's career at Caltech.

Following their first ineligibility, students are to meet with the dean or associate dean of undergraduate students. The dean may choose to reinstate them, in which case they will be on academic probation. Alternatively, the dean may direct them to petition the Undergraduate Academic Standards and Honors Committee (UASH) for reinstatement. UASH will either approve their petition for reinstatement and place them on academic probation, or require them to withdraw from the Institute for at least two terms. Students who fail a core course or who fail to successfully complete 36 units, even though they remain in good standing, are required to meet with one of the undergraduate deans before being allowed to register for classes in the subsequent term.

Students who become ineligible a second time will be required to withdraw from the Institute for at least two terms. Summer does not count as a term. A student who has been required to leave the institute because of academic ineligibility may, after at least two terms of leave, petition the Undergraduate Academic Standards and Honors (UASH) Committee for reinstatement. The UASH

Committee's decision regarding reinstatement will be based largely on whether or not such students have made good use of their time while away from the Institute. Useful activities include being gainfully employed, having an internship, engaging in a significant amount of volunteer work, or successfully completing courses at another college or university. The Committee will also expect that students applying for reinstatement will have completed work in all Caltech classes in which they had received an E or I grade.

Any student who becomes ineligible a third time will not be allowed to continue to enroll at Caltech.

Students who are ineligible may petition the UASH Committee to waive any of the rules listed above, but in order to do so they must first obtain permission from two of the following three individuals: The Dean of Undergraduate Students, the chair of the UASH Committee, and the Registrar. Permission to file a waiver petition will be granted only under exceptional circumstances.

Immigration regulations require undergraduate international students to enroll in and complete 36 credit hours (units) each term. Students who do not enroll in and complete 36 units each term are in violation of their immigration status and could face serious consequences. Under very limited circumstances, an international student may qualify for an underload. In any case, all underloads must be pre-approved (for immigration purposes) by one of the advisors in International Student Programs. The most common underload requests come from students with medical problems or from students who are in their final academic term at Caltech.

Student athletes participating in NCAA sports must be in good academic standing and enrolled full-time (36 units) to participate in both practices and games. Students who are reinstated by the deans or UASH are not eligible to compete or practice the term following a reinstatement.

LEAVES AND REINSTATEMENTS

The deans may place a student on medical leave if conditions warrant, and return from medical leave requires approval of the deans. Decisions on leaves and returns are always made in conjunction with the senior director of health and counseling services and/or the medical director of the Health Center.

A student may be placed on involuntary leave for disciplinary reasons by the Dean of Students, sometimes on the recommendation of the Conduct Review Committee. For academic violations of the honor code, the Board of Control makes recommendations on leaves to the deans. In general, disciplinary leaves specify a minimum time away but are indefinite in the sense that reinstatement depends on certain conditions being met. All students placed on involuntary leave have a procedural review conducted by the vice president of student affairs before the decision is final. Decisions on reinstatement are made by the deans, with consideration given to recommendations by the Board of Control when a leave is for academic violations of the honor code.

A student who is academically ineligible to register must withdraw voluntarily or petition for reinstatement, either immediately or later when the student feels ready to return. The deans can approve a first-time reinstatement petition; after that, petitions must be submitted to UASH. When a petition for reinstatement is denied, the student is placed on leave and advised what, if anything, can be done while away to improve the student's chances of being readmitted. The advisor's written statement on the reinstatement petition is an important source of information that will be considered by the deans and UASH.

Some students consider taking time off from Caltech to pursue various activities. All students are eligible to take an undergraduate student sabbatical for up to one year, provided they are in good academic standing. An undergraduate student sabbatical must extend over a period that includes at least one full

term. An undergraduate sabbatical is not granted in the term immediately following reinstatement. A student seeking a sabbatical must complete the sabbatical petition form and obtain his or her advisor's signature and approval of the deans. Return from a sabbatical does not require any application or petition. Students considering a sabbatical should be encouraged to discuss their plans with the deans and the Financial Aid Office staff. If the student fails to complete the petition form, the Registrar's Office will consider the student as withdrawn, and reinstatement will be necessary if the student wishes to return.

Any time a student separates from the Institute, a withdrawal card must be completed in the Deans Office, which is then forwarded to the registrar and other appropriate offices. The effective date of withdrawal is entered by the deans. A student who withdraws after Add Day of a term receives a mark of W in each class for which he or she was enrolled. These marks are not used in computing grade point average. Any student can voluntarily withdraw up to the last day of classes and receive W marks in their classes instead of grades. If a student leaves without filing the withdrawal card, the grades entered on the transcript will be those reported by the instructor or F grades for courses in which grades are not reported. Except for students with approved sabbaticals, any withdrawn student must go through some process with the deans or UASH to be reinstated.

A student who withdraws during a term is only liable for a prorated amount of tuition and fees based on the effective date of withdrawal, but with a cutoff at the sixth week of the term.

E & I GRADES

At their discretion, instructors may give students who have not completed their work for a course by the end of the term a grade of E (signifying extension). The grade of E indicates deficiencies that may be made up without repeating the course. If the instructor does not specify a date on the grade report sheet for completion of the work, students receiving an E will have until Add Day of the following term to complete their work for that course. Instructors may, however, require the work for the course to be completed by an earlier date, or a later date could be specified.

If a student receives an E and does not finish the work by the completion date, the grade will be changed to an F. Adequate time must be afforded to instructors to grade the work and to submit the final grade to the registrar.

With the written permission of the instructor, a student may extend the E grade past the completion date, but doing so will cause an additional E grade to be counted. Each additional extension of the E will be until the date specified by the instructor or until Add Day of the following term, but in each case will require the written permission of the instructor and the counting of an additional E grade.

After an undergraduate student has been awarded the grade of E six times, he or she is not eligible to receive E grades in any subsequent term. However, a petition for an E in a subsequent term may be approved by UASH in an exceptional case. Such a petition requires the support of the instructor and the deans.

The grade of I (signifying incomplete) is given only in case of sickness or other emergency that justifies non-completion of the work at the usual time. It is given at the discretion of the instructor, after approval by the deans. Often, the request for an I grade will come from the deans, who are familiar with the student's situation; in this case, the instructor will generally defer to the deans and grant the I. The time period within which the grade of I is to be made up should be indicated on the grade sheet,

or if not, students receiving an I will have until Add Day of the following term to complete their work.

E and I grades are not considered in calculating a student's grade-point average.

UNDERGRADUATE RESEARCH

Many students chose to come to Caltech because of the numerous undergraduate research opportunities available. While students can get involved with research at any point during the year, most students rely on summers and the SURF program to really immerse themselves in a research project. Nearly 80% of all undergraduates complete at least one SURF before graduation. The summers after a student's sophomore or junior year are the most popular. Few students do a SURF after their senior year, as only non-graduating seniors are eligible for SURF.

As an advisor you have the opportunity to help students navigate the path to securing a research project. Advisors have the ability to connect students with potential mentors - either at Caltech or at another college or university. Advisors should also encourage students to attend SURF information sessions and begin thinking about possible SURF projects by the end of Fall term. Students who begin planning early are usually most successful in finding a mentor. SURF applications, along with the supporting proposal, are due on February 22. Awards are made on April 1.

Connection to individual faculty members is a key factor in students' academic success. While academic advising is one connection, mentoring from a research advisor is another. Through their participation in an undergraduate research project, students should be able to understand and navigate the research process - from effectively developing a research question, to critiquing data, and communicating one's research findings.

For further information regarding the SURF program, contact the Student-Faculty Programs Office, 330 Center for Student Services, x2885, sfp@caltech.edu, or visit the Student-Faculty Programs website at <http://www.sfp.caltech.edu>.

The deans also offer between three and six fellowships every summer funded by the Noland endowment and the Monticello Foundation for female students to do research at off-campus locations, as well as a Beckman Political Internship that is open to

either a male or female student. In addition, the deans operate the Housner endowment, which provides about \$100,000 every year for scholarly activities for undergraduates, such as research projects, robotics competitions, and travel to academic conferences. Refer to www.deans.caltech.edu for details.

THE HONOR SYSTEM

The Caltech Honor System is embodied in a single phrase: “*No member of the Caltech community shall take unfair advantage of any other member of the community.*” Both academic and non-academic affairs are considered to be under the honor system. The system for undergraduates is governed by the Board of Control (BoC), whose chair is currently Anna Ross, and by the Conduct Review Committee (CRC), composed of students, staff, and faculty (co-chaired by Lesley Nye, and a student, currently Rachel Deghuee). The BoC deals mainly with academic violations, while the CRC is concerned with non-academic situations, such as violations of Caltech’s alcohol/drug or fire policies. A faculty member or TA who suspects an academic violation of the Honor System should e-mail boc@caltech.edu directly, or contact the deans (x6351) before taking any other action.

A student being investigated for an honor code violation may consult with his or her advisor. The advisor should not get involved directly in the judicial process, but rather counsel the student to cooperate fully. Any concerns that the advisor has about the situation should be brought up with the deans.

The Honor Code Handbook can be found here:
<https://deans.caltech.edu/HonorCode/HonorSystem>.

The handbook describes how the BoC makes three decisions: conviction, nullification of the advantage gained, and protection of the community. These decisions are actually recommendations to the deans. In some cases, the protection decision may stipulate an indefinite leave for the student.

Violations of Caltech’s harassment policy are dealt with by a process separate from the BoC and CRC. Refer to the Caltech catalog or the Title IX website: titleix.caltech.edu

CALTECH COUNSELING RESOURCES

1. The Undergraduate Dean is Kevin Gilmartin, Barbara C. Green, and Lesley Nye are the Associate Deans. Students should be referred to the deans for help with both academic and personal problems. Tutors are available through the Deans Office as well. The Deans Office can be reached at x6351 and is located in Room 210 in the Center for Student Services Building.

2. The Counseling Center staff is helpful with distress resulting from adjustment, stress, relationships, depression, substance abuse, academics, and any other problems that affect a student's well-being. Jennifer Howes, the Director of the Counseling Center, can be reached at x8331.

3. The Caltech Center for Diversity is responsible for fostering and furthering the community that supports underrepresented students, women, and members of the LGBTQ community. The office provides confidential support, advocacy, and crisis intervention services. They assist students with a variety of concerns, such as harassment, sexual harassment, relationship violence, stalking, or sexual assault. They develop and implement retention programs, respond to day to day issues and concerns that arise with students, and sponsor educational support and leadership development programs. They also coordinate several mentoring, networking, and other academic support programs for women in science and engineering. Hanna Song, Senior Director of the Caltech Center for Diversity, can be reached at x2303, and Eva Graham, Director can be reached at x6207.

4. Students may access the Counseling Center staff and Erin-Kate Escobar x5772 and Taso Dimitriadis x8108 in the Caltech Center for Diversity as confidential resources. Talking to any of these individuals does not constitute reporting an incident involving a member of the Caltech community to the Institute. These offices can provide you with support and can guide you through Institute procedures. Students may also contact the CCD main line at x6207.

5. Resident Associates (RAs) are graduate students who live in the undergraduate houses. They know all the students personally and are a good resource. Contact information for the RAs and Residential Life Coordinators can be obtained from Lesley Nye at x6351 and is also available on the Deans Office website.

6. The Career Development Center (CDC) helps students with career planning and applying for graduate or professional school. Students planning to go to medical school or enter health professions should talk to the pre-health program advisor, James Berk, x6364, soon after coming to Caltech. The CDC holds a fall and spring career fair at which students can learn about full time and summer internships in a number of areas. The CDC runs an on-campus recruiting program for full-time positions and in some cases summer internships. Students who wish to find paid positions as tutors off campus can register on the CDC site. For further information and contact information, go to: <http://career.caltech.edu/>. Students are seen by appointment or in set walk-in counseling times.

7. The advisors in International Student Programs (ISP) provide information about U.S. immigration regulations. They (and they alone) can sign Caltech immigration documents. In addition, the international advisors are always available to discuss cultural adjustment difficulties that students may experience. ISP also sponsors a variety of social, educational and cultural programs open to the entire Caltech community. The advisors in ISP see all Caltech students on a walk-in basis or by appointment. The office is located in the Center for Student Services. Laura Flower Kim, Associate Director of International Student Programs, can be reached at x6330.

8. The Registrar's Office can help answer questions about core requirements, registration, courses and grading. Mary Morley is the registrar and can be reached at x6354.

9. Fellowships Advising and Study Abroad (FASA) helps Caltech

undergraduates seek out information on, and apply for a wide variety of highly competitive fellowships for study both in the U.S. and abroad after graduation. Note that for funding for study at Caltech, students should contact the Financial Aid Office. In addition to fellowships advising, FASA also runs Caltech's official study abroad programs. These offer students the opportunity to study science, math, economics and engineering and receive Caltech option or general credit. Some programs allow students to study subjects in the humanities or social sciences. Participating universities are the University of Cambridge, University of Copenhagen, Danish Technical University, University of Edinburgh, University College London University of Melbourne and Ecole Polytechnique. FASA also administers the competitions for the San Pietro Summer Travel Prize and the Bishop Summer Study Abroad Fellowship. Go to <http://fasa.caltech.edu/> for further information. Students can call x2150 to schedule an appointment.

10. The Financial Aid Office can be very helpful to students who have questions about their financial aid packages and additional sources of financial aid. Don Crewell is the director of financial aid and can be reached at x6172.

IMPORTANT DATES 2016 - 17

First Term 2016

September 26	Instruction begins.
September 22	UASH committee meeting
October 14	Add Day <i>Plan on an increased advising load as this day approaches.</i>
October 26 - November 1	Midterm examination period
November 7	Deficiency notices due <i>Review deficiencies with advisees prior to Drop Day.</i>
November 16	Drop Day <i>Plan on an increased advising load as this day approaches.</i>
November 17 - December 2	Registration for second term, 2016-17 <i>Be available for advising.</i>
November 24-25	Thanksgiving recess
December 7-9	Final examinations
December 10 - January 3	Winter recess

Second Term 2017

January 4	Instruction begins
January 5	UASH committee meeting
January 16	Martin Luther King holiday (classes do not meet)
January 25	Add Day <i>Plan on an increased advising load as this day approaches.</i>
February 3-9	Midterm examination period.

June 7 -9	Final exams for seniors
June 14 - 16	Final exams for all undergraduates except seniors
June 16	Commencement

UNDERGRADUATE OPTION REPRESENTATIVES

[HTTP://REGISTRAR.CALTECH.EDU/ACADEMICS/UG_OPTION_REPS](http://REGISTRAR.CALTECH.EDU/ACADEMICS/UG_OPTION_REPS)

Aerospace (Minor)

Beverly J. McKeon, 207 Firestone, MC 301-46, x4460,
mckeon@caltech.edu

Applied & Computational Mathematics Option

Peter Schroeder; 306 Annenberg IST Center, MC 305-16; x4269;
ps@caltech.edu

Maria Lopez, Option Admin; 341 Annenberg, MC 305-16; x3034;
mlopez@cms.caltech.edu

Applied Physics Option

Oskar Painter, 266 Watson, MC 128-95, x8008, opainter@caltech.edu
Jennifer Blankenship; Option Admin; 106 Watson, MC 128-95; x8124;
jennifer@caltech.edu

Astrophysics Option

Lynne Hillenbrand; 218 Cahill, MC 249-17; x6587;
lah@astro.caltech.edu

Biology Option

Bruce Hay; 308A Kerckhoff, MC 156-29; x3399;
haybruce@its.caltech

Raina Beaven, Option Admin; 109 Kerckhoff, MC 156-29; x 2393;
rbeaven@caltech.edu

Bioengineering Option

Changhuei Yang; 262A Moore Lab, MC 156-29; x8922;
chyang@caltech.edu

Linda Scott, Option Admin; 158 Broad, MC 114-96; x6337;
scottl@caltech.edu

Business Economics & Management Option

Jaksa Cvitanic; 319 Baxter, MC 228-77; x1784;
cvitanic@caltech.edu

Chemical Engineering Option

Konstantinos Giapis; 219 Spalding, MC 210-41; x4180;
giapis@cheme.caltech.edu

Kathy Bubash, Option Admin; 206 Spalding, MC 210-41; x4193;
Kathy@cheme.caltech.edu

Chemistry Option

Mitchio Okumura, 104 Noyes Lab, MC 127-72, x6557,
mo@caltech.edu

Amy Woodall-Ojeda; (Option Admin); 168B Crellin, MC 164-30; x3904
amy.ojeda@caltech.edu

Computer Science Option (and Minor)

Chris Umans; 311 Annenberg, MC 305-16; x5725;
umans@caltech.edu

Maria Lopez, Option Admin; 341 Annenberg, MC 305-16; x3034;
mlopez@cs.caltech.edu

Control & Dynamical Systems (Minor)

John Doyle; 210 Annenberg, MC 305-16; x4808;
doyle@cds.caltech.edu

Maria Lopez, Option Admin; 341 Annenberg, MC 305-16; x3034;
mlopez@cs.caltech.edu

Economics Option

Robert Sherman, 119 Baxter Hall, MC 228-77, x4337,
Sherman@caltech.edu

Electrical Engineering Option

Ali Hajimiri; 302 Moore Lab, MC 136-93; x2312;
hajimiri@caltech.edu

Tanya Owen, Option Admin; 136 Moore Lab, MC 136-93; x8817
tanya@caltech.edu

Engineering and Applied Science Option

Azita Emami; 335 Moore Lab, MC 136-93; x8417;
azita@caltech.edu

Tanya Owen, Option Admin; 136 Moore Lab, MC 136-93; x8817
tanya@caltech.edu

Engineering and Applied Science (CNS concentration)

Pietro Perona; 104A Moore, MC 139.93; x4867;
perona@caltech.edu

Tanya Owen, Option Admin; 136 Moore Lab, MC 136-93; x8817
tanya@caltech.edu

Engineering and Applied Science (MS concentration)

Brent Fultz, 239 Keck Lab, MC 138-78; x2170;

btf@caltech.edu

Jennifer Blankenship; Option Admin; 106 Watson, MC 128-95; x8124;

jennifer@caltech.edu

Environmental Science and Engineering (Minor)

Andrew Thompson; 224 Linde+Robinson, MC 131-24;x8345;

andrewt@caltech.edu

English Option (and minor)

Dehn Gilmore; 315 Dabney, MC 101-40; x1749;

kmg@hss.caltech.edu

Sinikka Elvington, Option Admin; 301 Dabney, MC 101-40; x1724

elvington@hss.caltech.edu

Geology Option

Michael Lamb, 270 Arms, MC 170-25, x3612,

mpl@caltech.edu

Julie Lee, Option Admin; 164 Arms, MC 170-25; x 6125;

jlee@gps.caltech.edu

Geobiology Option

Alex Sessions; 108A N. Mudd, MC 100-23; x6445;

als@gps.caltech.edu

Julie Lee, Option Admin; 164 Arms, MC 170-25; x 6125;

jlee@gps.caltech.edu

Geochemistry Option

George Rossman; 357 Arms, MC 170-25; x6471;

grr@gps.caltech.edu

Julie Lee, Option Admin; 164 Arms, MC 170-25; x 6125;

jlee@gps.caltech.edu

Geophysics Option

Jennifer Jackson; 354 S. Mudd, MC 252-21; x6780;

jackson@gps.caltech.edu

Julie Lee, Option Admin; 164 Arms, MC 170-25; x 6125;

jlee@gps.caltech.edu

Geological & Planetary Science (Minor)

Julie Lee, Option Admin; 164 Arms, MC 170-25; x 6125;
jlee@gps.caltech.edu

History Option (and minor)

Warren Brown, 204 Dabney, MC 101-40, x4482,
wcb@caltech.edu

Fran Tise, Option Admin; 200 Dabney, 101-40; 3609
ftise@hss.caltech.edu

History of Philosophy and Science Option (and minor)

Diana L. Kormos-Buchwald; 363 S. Hill, MC 20-7; x8040
diana_buchwald@caltech.edu

Sarah “Emily” de Araujo, Admin; 363 S. Hill, 20-7; x8028
emilya@caltech.edu

Mathematics Option

Nets Katz; 164 Sloan, MC 253-36; x2326
nets@caltech.edu

Meagan Heirwegh, Option Admin; 253 Sloan, 103-33; 4336
heirwegm@caltech.edu

Mechanical Engineering Option

Guillaume Blanquart; 255 Gates-Thomas, MC 104-44; x4306;
g.blanquart@caltech.edu

Philosophy Option (and minor)

Christopher Hitchcock; 210 Dabney, MC 101-40; x3602;
cricky@hss.caltech.edu

Fran Tise, Option Admin; 200 Dabney, 101-40; 3609
ftise@hss.caltech.edu

Physics Option

Gil Refael, 164 W. Bridge, MC 149-33, x4705,
refael@caltech.edu

Meagan Heirwegh, Option Admin; 253 Sloan, 103-33; 4336
heirwegm@caltech.edu

Planetary Science Option

David Stevenson; 172 S. Mudd, MC 150-21; x6534;

djs@gps.caltech.edu

Julie Lee, Option Admin; 164 Arms, MC 170-25; x 6125;

jlee@gps.caltech.edu

Political Science Option

Mike Alvarez; 325 Baxter Hall, MC 228-77; x4089;

rma@hss.caltech.edu

Structural Mechanics (Minor)

John Hall; 211 Thomas; MC 104-44; x4160;

johnhall@caltech.edu

USEFUL CALTECH OFFICES AND CONTACTS

Bursar (billing, servicing student accounts)

120 Center for Student Services (south wing)

Ruth Sharp, Bursar: x3636, ruth.sharp@caltech.edu

Caltech Center for Diversity (advising and programming for women, underrepresented minority and LGBTQ students; confidential resource)

255 Center for Student Services (north wing)

Hanna Spinosa, Senior Director x2303, hsong@caltech.edu

Eva Graham, Director: x6207, egraham@caltech.edu

Taso Dimitriadis (Asst. Director): x8108, taso@caltech.edu

Erin-Kate Escobar (Asst. Director); x3221

ekescoba@caltech.edu

Career Development Center (career advising, internships, pre-med program)

3rd Floor Center for Student Services (north wing)

Lauren Stolper, Director: x2150, lstolper@its.caltech.edu

James Berk (pre-health program): x6364 jberk@caltech.edu

Deans Office (academic and mental health issues; accommodations for disabilities; petitions such as underload, overload, permission to work, sabbatical and reinstatement; tutoring arrangements; behavioral issues; emergency loans and grants; back-up advisor functions)

210 Center for Student Services (south wing)

Kevin Gilmartin, Dean of Undergraduate Students: x6351

kmg@hss.caltech.edu

Barbara Green, Associate Dean: x6351, barbarag@caltech.edu

Lesley Nye, Associate Dean of Undergraduate Students; x6322

lnye@caltech.edu

For additional information: www.deans.caltech.edu

Fellowships Advising and Study Abroad

319 Center for Student Services (south wing)

Lauren Stolper, Director: x2150, lstolper@its.caltech.edu

Financial Aid (financial aid packages, scholarship requirements, loans)

110 Center for Student Services (south wing)

Don Crewell, Director: x6172, dcrewell@caltech.edu

Martha Michel, Assoc. Director: x6533, mmichel@caltech.edu

Health and Counseling Center (physical and mental health issues, health insurance)

1239 Arden Road

Jennifer Howes, Director, Counseling Center: x8331,

jhowes@caltech.edu

Call 4701 to page the on-call psychologist after hours.

After-hours physical health: call 626-584-2421 and ask to speak to Dr. Stuart Miller.

For additional information:

www.counseling.caltech.edu,

www.healthcenter.caltech.edu

Housing and Dining (practical issues regarding food and housing infrastructure, room assignments)

1st floor Center for Student Services (north wing) for Housing

Maria Katsas, Director of Campus Housing: x6176,

maria@caltech.edu

Michael Raven, Asst. Dir. for Operations and Maintenance:

x8036, Michael.raven@caltech.edu

International Student Programs (immigration matters, advising related to social and cultural issues)

250 Center for Student Services (north wing) x6330,

isp@caltech.edu

Ilana Smith, Director for International Office at Caltech & JPL

X4329, ilana.smith@caltech.edu

Laura Flower Kim, Associate Director: x2110,

laura.flowerkim@caltech.edu

Daniel Yoder, International Student Advisor: x6330,

dyoder@caltech.edu

MOSH (residential life issues, Residential Life Coordinators, RAs, student-faculty interaction programming) contact
<http://mosh.caltech.edu/contact.asp>

For RLCs and RAs, also contact Lesley Nye: x6351,
lnye@caltech.edu

Registrar (registration, courses, grades, progress reports, UASH issues, assignment of permanent advisors)

125 Center for Student Services (south wing)

Kim Mawhinney, Acting Registrar: x1797,
Kim.mawhinney@caltech.edu

Gloria Brewster (primary undergraduate contact): x6355,
ghb@caltech.edu

For additional information: www.registrar.caltech.edu

Student Faculty Programs (SURF program)

330 Center for Student Services (south wing)

Director, Candace Rypisi: x2886, candacer@caltech.edu

Associate Director, Carol Casey: x2887, casey@caltech.edu

Student Activities and Programs (clubs, student activities)

165 Center for Student Services (north wing)

Tom Mannion, Senior Director for Student Activities & Programs: x6174, mannion@caltech.edu

Title IX (TitleIX.caltech.edu)

Felicia Hunt, Assistant Vice President for Equity, Accessibility, & Inclusion Initiatives, Title IX Coordinator: x3132
fhunt@caltech.edu