Congrats on your decision to apply to Study Abroad!
(We think it’s the best decision you’ve ever made.)
STEM Abroad

• Scientific research is a global endeavor.

• On a resume, study abroad is now nearly as indispensable as strong communication skills or tech skills.

• When applying for the NSF Graduate Research Fellowship, students must show Broader Impacts. Studying abroad and having a more global perspective counts as a Broader Impact.

• Students build cross-cultural skills and international experience required to participate fully in the modern global academic community or industry/business.

• And of course it is just plain fun!
Things to Consider:

• What programs will work best for you academically?
• Don’t choose a program based on:
  – Location
  – Weather
  – Imagined Prestige
  – Your parents told you to go there
  – Your best friend is going there too
  – Dreams of Hogwarts
GPA Requirements

Cambridge 3.4
DTU & KU 3.0
Ecole Polytechnique 3.3
Edinburgh 3.0
Melbourne 3.0
UCL 3.3

Exceptions for GPAs under 3.0

• KU and DTU occasionally accept students with a 2.8 if they can show the ability to do 3.0 work in their option
How many programs should I apply for?

- Cambridge has 10 places (6 Michaelmas, 4 Lent)
- Copenhagen has 5-10 places per university
- Ecole Polytechnique has no limit
- Edinburgh has 5-20 places
- Melbourne is unlimited
- UCL has 5-10 places

If you are applying to Cambridge you are required to have an alternate choice other than the other Cambridge Term. We suggest if UCL is your first choice, you have a 2\textsuperscript{nd} choice other than Cambridge.
A complete application includes:

• Application Checklist
• Caltech Scholars Program Application Form
• Unofficial Transcript
• Proposal includes essay and course list
• 2-3 Letters of Recommendation & Recommendation Form (2 required, 3rd optional)
Study Abroad Application Checklist

Name of Student: ____________________________
Class: _________________________________
Major: _________________________________

****This application is my own original work. I have not received professional assistance in writing or proofreading my essays.

Signature: ____________________________ Date: __________

Program(s):
- [ ] Cambridge, Michaelmas - Fall Term
- [ ] Cambridge, Lent - Winter Term
- [ ] DTU, Fall Term
- [ ] Ecole Polytechnique, Fall Term
- [ ] KU, Fall Term
- [ ] University College London, Fall Term
- [ ] University of Edinburgh, Fall Term
- [ ] University of Melbourne, Fall Term

First Choice: ________________________________
Second Choice: ________________________________
Third Choice: ________________________________
Fourth Choice: ________________________________

☐ Program Application
☐ Proposal (essay, courses needed to graduate, program fit, and proposed course)
☐ Proposal Re-Write (if necessary)
☐ Recommendation 1 from: ________________________________
☐ Recommendation 2 from: ________________________________
☐ (Optional) Recommendation 3 from: ________________________________
☐ Transcript (unofficial ok): ________________________________

Write the names of your recommenders here, but do not check them off.

FASA notes: ________________________________ Date Received: __________

________________________________________
________________________________________
________________________________________
________________________________________
________________________________________
________________________________________
Caltech Scholars Programs
Application Form for Study Abroad

Due 3pm, January 25

Turn all materials in to: Fellowships Advising & Study Abroad Office, Rm 319, Center for Student Services.

Please follow these directions:
• Only hard-copy applications will be accepted. Do not email any part of your application.
• Do not staple pages together, only use paperclips.
• Print only single-sided. NO double-sided documents will be accepted.
• Put your name in the upper right hand corner of every page of the proposal.
• Put the page number in the lower right hand corner of every page of the proposal.
• Assemble your application in the order listed on the Study Abroad App. Checklist
• Minimum 3.0 GPA to apply for Study Abroad

What program(s) are you applying for? Check all that apply.

☐ Cambridge, Michaelmas (Fall) Term
☐ Cambridge, Lent (Winter) Term
☐ DTU, Fall Term
☐ KU, Fall Term
☐ Ecole Polytechnique, Fall Term — DUE JAN. 15
☐ Edinburgh, Fall Term
☐ Melbourne, Fall Term
☐ UCL, Fall Term

Please list programs by preference. If applying for Cambridge Lent and Michaelmas, list them separately.

First Choice: __________________________
Second Choice: _______________________
Third Choice: _________________________
Fourth Choice: _________________________
Fifth Choice: _________________________
Sixth Choice: _________________________

1. Student’s Name: ___________________________ Nickname:______________________
2. Caltech email address: _______________________________ Preferred _________
3. Alternate email address: _______________________________ Preferred _________
4. Caltech UID: _______________________________________
5. MailBox number: ___________ Cell Phone: ________________________________
6. Current Class Year: □ Sophomore □ Junior
7. Date of Birth: ___________ Age during term you will study abroad: ___________
8. House Affiliation: ___________________________
9. Citizenship: □ U.S. □ Permanent Resident □ Int’l Student

Do you currently hold a valid passport? □ Yes □ No
If not a U.S. citizen, give country of citizenship: _________________________________

10. Cumulative G.P.A. _________ GPA for last two terms (if avail.) (s)________ (f)________
11. Option: ________________________________
Formatting Requirements

- Only hard-copy applications will be accepted. **Do not email** any part of your application.
- **Do not staple** pages together, only use paperclips.
- **Print only single-sided.** NO double-sided documents will be accepted.
- Put your **name in the upper right** hand corner of every page of the proposal.
- Put the **page number in the lower right** hand corner of every page of the proposal.
- Assemble in the order outlined in the directions.
Proposal

In addition to the Application Form:
1. Essay (1 page max, single spaced) This is your rationale for study abroad – focus on academics, but can include some information on personal goals such as expanding your horizons or travel. *One essay regardless of number of programs you apply to.*
2. Program fit: In a paragraph for each program, describe how do the courses you’ve selected (for each program) work with your degree requirements and academic goals.
3. Proposed course list: requires understanding of each program’s rules (see handouts on each program)
4. Degree Audit
5. Transcript
6. Two References, Third Optional
Study Abroad Proposal

1. **ESSAY**: Provide a brief personal narrative (up to a page single spaced) on the value of a term/semester abroad for you academically and personally. Be sure to include a rationale for going abroad. Note that 3 members of the selection committee are not looking to be entertained. These should be thoughtful statements and students selected to study abroad will have their statement reviewed by host university faculty. **Note that all applicants selected by Caltech to study abroad must also be accepted by the host university/Cambridge college — this process happens after the Caltech selection process is completed.**

Growing up in a biracial family I have developed a strong interest in other countries and their cultures. My parents have lived overseas and encouraged me to do the same, in order to build tolerance for people of all ethnic backgrounds by learning how they live and think in other parts of the world. During my time at Caltech, I’ve learned and gained so much from utilizing the amazing network of faculty and students, but there are still limits to how much I can take from residing in Caltech’s small, tight-knit environment. Studying abroad will provide me the push that I need to become a more global citizen.

Living in another country is a great way to meet people of different backgrounds and experience the more subtle aspects of culture that don’t come across on paper. I had a taste of life abroad through the Caltech Y Program this December. Our group traveled to Ahmedabad, India to learn about its identity and traditions. Though I had researched India, its national achievements, and its attitudes towards engineering beforehand, nothing could compare to what I learned on the ground. Listening to lectures by Indian professors, working alongside students from IIT Gandhinagar, and seeing India through my own eyes was a thousand times more effective than any reading on a computer screen. Whether it be India or the UK, immersing myself in a new culture makes me more aware of differences between the place abroad and the US. The conversations I have had with fellow engineers change the way I think about technology and advancement. What does improving quality of life mean for people living halfway around the world? If a week-long program provides me with so much more insight, I can only imagine what a semester abroad will mean.

Another reason I want to study abroad is to challenge myself in a new environment. From prior experiences inside the classroom and out, I’ve realized that it’s in new and demanding situations where I grow the most. When I started my internship at Facebook last summer, I was tasked with creating an app. It was my first time working at a large company, not to mention I had no prior knowledge of app development. However, pulling from what I knew best from Caltech - how to collaborate - I brought my team of three students together. I set up meetings, organized a time-table, and reached out to designers at Instagram for their outside feedback. Knowing I lacked the experience in Android Studio gave me the drive to work harder, until I was able to match my teammates. Similar to my situation at Facebook, this study abroad opportunity will push me outside of my comfort zone. While I may not always come in with the same background as others, what matters more is my ability to grow and adapt. In adapting to the new culture, classes, and learning styles I hope to develop further the skills and versatility I’ll need as an engineer.

There is a lot to be gained from a semester abroad. For me, I see this as an opportunity for growth, independence, and developing a global perspective. As a computer engineer, I know that my field is not limited by national boundaries. This experience living abroad will help me better understand the needs of people in other countries and develop better products that not only work in the US, but also in other parts of the world.
2. **PROGRAM FIT**: Briefly describe how each program you are applying for fits in with your course of study at Caltech. If you are applying for several programs with a range of course types, provide this information in the order of your program preference with *#1 being your most preferred study abroad university.*

1. Edinburgh has one of the best informatics department in the UK and is famously known for its strengths in theoretical Computer Science. I have taken several theoretical courses at Caltech, and it will be interesting to see how Edinburgh’s theoretical classes compare. The school has a large variety of intellectually challenging and rigorous Computer Science courses. I appreciate the great selection of courses because it gives me the opportunity to take classes that I wouldn’t find here at Caltech. Additionally classes like Database Systems (INF10070) match well with classes taught at Caltech so will work well in my schedule when I return from Study Abroad. Situated around plenty of activities and beautiful scenery, with a mix of country and city life, Edinburgh is in an ideal location for a student.

2. UCL is known for Computer Science research, but also has a flexible range of subject options. It would be very interesting to take a class on the London Collections in London, which gives the class material a lot more context. UCL has a very diverse student population, with people attending the school from all over the world. I would gain a lot from having conversations with these students of different backgrounds. UCL is also at the center of London and has close connections to the Computer Science industry, which is helpful for me as a junior applying to summer internships.
University of Edinburgh Proposed Course List

Total Edinburgh Credits: 70
Total CIT Units: 36
Course by Correspondence/Units: 0

1. Computer Security
   College of Science and Engineering
   School of Informatics
   SCQF Level 10
   Semester 1
   SCQF Credits: 20
   Caltech units: 9
   Caltech evaluator: Christopher Umans
   Type of Caltech credit: Option
   Course description:
   Computer Security is concerned with the protection of computer systems and their data from threats which may compromise integrity, availability, or confidentiality; the focus is on threats of a malicious nature rather than accidental. This course aims to give a broad understanding of computer security. Topics include security risks, attacks, prevention and defence methods; techniques for writing secure programs; an overview of the foundations for cryptography, security protocols and access control models.

2. Introduction to Vision and Robotics (INFR09019)
   College of Science and Engineering
   School of Informatics
   SCQF Level 9
   Semester 1
   SCQF Credits: 10
   Caltech units: 9
   Caltech evaluator: Christopher Umans
   Type of Caltech credit: Option
   CIT equivalent course: NA
   Course description:
   The issues addressed will include the following:
Required Courses Abroad

- Students can get **option requirement credit**, **general credit**, or **HSS credit**. No need for professor approval until *after* you are selected for a program. Minimum 36 units are taken abroad, with at least 18 units for option credit.

- Look through the **Equivalent Course Guide**, sample proposals, surveys, and sample course lists in the FASA Library.

- Look through each university’s courses online.

- If needed, confer with CIT professors or instructors abroad to determine equivalency issues (if it is not clear that a course will fulfill a specific option requirement).

- You can take one *Course by Correspondence* with the approval of the Caltech professor.
Proposed Course List

• In program preference order and for EACH program you are applying to, list each of the courses you wish to take according to the directions below.

• All option courses need to be listed first. Next, list other STEM classes. Last, but not least, list HSS.

• You should consult the handout on each program to ensure that you fully understand the program requirements.

• Note that creating each proposed course list is the most time consuming part of the application.

• Make sure you have the prerequisite coursework.

• It is wise to start NOW! This is more complex than you think!
Who should write your letters of recommendation?

- **1st letter** must be from someone who has taught or supervised you in your **STEM option or a closely related area and be written by Caltech professor or instructor**. Cannot be TA or peer of any kind. Cannot be an employer.

- **2nd letter** must be from someone who has taught or supervised you in your **STEM option or a closely related area**. Can be a prof/instructor, a graduate TA, or from someone who has supervised you in STEM research at Caltech or another university or at a national lab or research institute. Cannot be an employer.
Optional 3rd letter can be from someone else (but not a peer) who knows you well and can show something the other two letters cannot. For example from an employer, RA, or a coach. *No relatives.*

Letter writers must complete the reference form and **submit a typed and signed letter.** They can send these to FASA through campus mail. If not at Caltech, they can snail mail it to our office. You can hand carry it to us, as long as it is in a sealed envelope with the letter writer’s signature on the seal. **ASK THEM NOW!**
Caltech Scholars Programs Reference Form

Official Reference Form for Study Abroad Applicants

Please return by January 26

To: Lauren Stolper, Director, Fellowships Advising & Study Abroad
California Institute of Technology
Mail Code 319-87, Pasadena, CA 91125

* This section to be completed by student *

Name of Applicant: __________________________ Option: ________________________________

☐ Sophomore  ☐ Junior

Please check if transfer or 3-2 student:  ☐ Transfer  ☐ 3-2

Program(s): Check all that apply

☐ Cambridge University (Michaelmas - Fall Term)  ☐ University College London (Fall Term)

☐ Cambridge University (Lent - Winter Term)  ☐ University of Edinburgh (Fall Term)

☐ Copenhagen University or DTU (Fall Term)  ☐ University of Melbourne (Fall Term)

☐ Ecole Polytechnique, use the Ecole Polytechnique form located at:
https://portail.polytechnique.edu/admissions/en/other-programs/international-academic-exchange-program/how-apply

☐ This is a CONFIDENTIAL evaluation. I hereby waive my access to this evaluation
as per the Family Education Rights and Privacy Act of 1974.

Applicant’s signature: ___________________________ Date: ____________________________

Information for the applicant:

Students are required to submit two references – at least one must be from a member of the professorial faculty in the student’s Caltech option. The second reference must be from an individual in the student’s option, but not necessarily based at Caltech, (e.g., teaching assistant, instructor/lab instructor, CIT professor, visiting professor, research supervisor, etc.). Note that students may submit a third reference from individuals not in the student’s option, (e.g. resident advisor, coaches, humanities faculty, employers, scientists/engineers from other universities or research centers). Students should submit the third letter only if it provides additional significant information.

Name of the reference writer: ____________________________________________________________

Letters may be sent to the FASA Office via campus mail, regular mail, or hand delivered by the letter writer. If the reference is delivered by the student, it must be in a sealed envelope with the letter writer’s signature on the seal. Open letters delivered by the student will not be accepted.

Information for recommender: This reference will be helpful in evaluating the applicant’s qualifications for participating in one of Caltech’s official study abroad programs. Please reference the applicant’s academic and personal qualifications as well as character. Students participating in a study abroad program will take courses in or highly related to their Caltech option. Note that this recommendation is not just for internal selection, but will also be forwarded to the university abroad if the student is accepted into the Caltech Scholars Program. Please complete all portions of the form as requested and include a signed letter. Incomplete evaluations cannot be considered. An electronic version of this form is available at http://fasa.caltech.edu.
2.) How long have you known the applicant? ___________ In what capacity? ______________________

3.) How does the applicant compare with the better Caltech undergraduates you have taught? Please complete the evaluation chart below. Check the box that best indicates your opinion of the applicant’s qualifications. Please compare the applicant with other Caltech undergraduates at a comparable level of education and research experience.

<table>
<thead>
<tr>
<th>Exceptional</th>
<th>Outstanding</th>
<th>Unusual</th>
<th>Good</th>
<th>Above Average</th>
<th>Average or below</th>
<th>Inadequate opportunity to observe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 5%</td>
<td>Next 5%</td>
<td>Next 10%</td>
<td>Next 15%</td>
<td>Next 15%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Mastery of basic knowledge in student’s option
2. Familiarity with and ability to use laboratory techniques
3. Ability to express self orally and in writing
4. Originality and imagination in academic work
5. Capacity for conscientious, hard work
6. Potential for future growth in science and engineering
7. Ability to get things done independently
8. Adaptability to new situations
9. Emotional stability and maturity
10. Impression applicant will make abroad academically and socially

5) From my knowledge of this applicant, I am willing to give my:
   □ Full Endorsement   □ Qualified Endorsement

Name (please print) ____________________________________________
Department __________________________________________________
Title /Position ________________________________________________
University (if not Caltech) ________________________________
Signature ________________________________________ Date __________

NOTE WELL: This form can be filled out electronically, but must be printed out and delivered as a hard copy to the FASA Office (listed above) through campus mail or by hand. If hand carried by the student, it must be in a sealed envelope with your signature over the seal. Please clip (do not staple) your letter of recommendation to this form. Please remember to sign your letter of recommendation.
Caltech Transcript

(Prefer unofficial)

Note that students are advised to clear up any extensions prior to the deadline date if possible and in their proposal explain any grade/extension issues that they feel should be brought to the attention of CEPSA in the selection process.
Resources

- Walk-In Hours are Tuesdays and Thursdays, 9-11am & 2-4pm
- FASA office library has previous study abroad student comments and course list examples available for review in library
  - Library is open every Monday-Friday, 8am-5pm, but closed from 12-1pm
- FASA website: [http://fasa.caltech.edu/](http://fasa.caltech.edu/)
- FASA Study Abroad Facebook page: [https://www.facebook.com/FASA.study.abroad/](https://www.facebook.com/FASA.study.abroad/)
All forms need to be turned in to the FASA Office, Room 319, Center for Student Services by 3pm, Thursday, January 25, 2018.

Or by Tuesday, January 16\textsuperscript{th} at 3pm for Ecole Polytechnique program applicants.

All students will be interviewed in February.
Questions?