Program & Course Guide for Study Abroad
Table of Contents

1. Introduction to Study Abroad .......................................................................................... 1
2. Planning Your Study Abroad Experience ..................................................................... 2
3. Program Options ........................................................................................................... 3
   Australia ......................................................................................................................... 4
   France
      Georgia Tech—Metz ...................................................................................................... 5
      Ecole Centrale—Paris ................................................................................................ 6
   Germany .......................................................................................................................... 7
   Hong Kong ..................................................................................................................... 8
   Israel ............................................................................................................................... 9
   United Kingdom .......................................................................................................... 10
4. Summer Suggestions .................................................................................................. 11
Introduction to Study Abroad

The Department of Mechanical Engineering recognizes that a study abroad experience is a valuable part of an undergraduate education. Study abroad expands your horizons, immerses you in a vibrant new culture, and allows you to gain new insights into your own way of life, while continuing to earn your Carnegie Mellon degree.

In addition, the College of Engineering offers a Global Engineering minor to students that complete a study abroad experience. Click the above link for more information on this CIT minor.

With careful planning, any Mechanical Engineering student in good standing may study abroad. A variety of study abroad options are available to students at Carnegie Mellon. Most of these programs focus on the student’s junior year, although the second semester sophomore year is also an excellent opportunity to study abroad. The summer represents an excellent opportunity to complete some general education classes or electives with a much broader selection of programs.

Funding within CMU may be available through the CIT Travel Grant program, the Modern Language Study Abroad Scholarships, Jennings Family Brave Companions, the Mechanical Engineering Department, Tartans Abroad, and the Benjamin A. Gilman International Scholarship. More information is available on the OIE website.

http://www.studentaffairs.cmu.edu/oie/sab/gettingstarted/funding/scholarshipsCarnegie.html
Planning your Study Abroad Experience

1. Once you decide to study abroad, you can plan your study abroad experience. Review the university Study Abroad website for general background and information about programs, locations, and university policies.

2. Attend an Information Session. There are two large information sessions held each semester. No reservation is required for these sessions. In the fall semester, mini-information sessions are held several times in the Office of International Education (OIE) on the 3rd floor of Warner Hall. See the Study Abroad calendar for times and dates. You may also call the Study Abroad receptionist (412-268-5231) to sign up for a time.

3. Once you have attended an information session and are ready to start a detailed search, schedule an appointment with Bonnie Olson or Eva Mergner, the MechE Academic Advisors: www.cmu.edu/me/ (Big yellow button on the right!) You can talk about promising programs that fit the constraints of the MechE curriculum. You can also review the programs in this guide. These programs allow study abroad without an additional semester at Carnegie Mellon and can save you valuable time researching options.

4. You are also welcome to conduct independent research through the Carnegie Mellon Study Abroad website, as well as other study abroad web search engines, including: www.iiepassport.org, www.studyabroad.com, and www.goabroad.com.

5. In addition to searching the web, OIE has study abroad resource books that you can browse and photocopy, as well as brochures you can take with you. OIE is located on the 3rd floor of Warner Hall. The Study Abroad Library is open during regular office hours (Monday—Friday, 8:30 a.m. – 5 p.m.).

6. If you are interested in a program at a university not listed on the pre-reviewed universities included in this guide, talk to Bonnie or Eva about the program’s impact on your graduation date and scheduling of required MechE classes. Please provide course descriptions for any Mechanical Engineering classes and semester dates to begin the approval process for transfer credit. We are always interested in new options to add to this guide!

7. Schedule an appointment with a study abroad advisor at OIE by calling the Study Abroad receptionist (412-268-5231). Bonnie or Eva can assist with suggestions of where to study and how your experience affects your Carnegie Mellon studies. However, details about applications, housing, financial aid, etc. are handled through the Study Abroad Office in Warner Hall.
Program Options

The following schools have provided popular destinations for study abroad opportunities for MechE students at Carnegie Mellon. While you are not limited to these programs, coursework and calendars have been reviewed and details about how they mesh with our curriculum is included. Some summer suggestions are mentioned, but the opportunities are varied and exciting all around the world!

If you decide to pursue one of these programs, please note that a final review will be necessary to verify transfer credit due to changes in course content and scheduling, or to review additional information before a final decision is made regarding credit.

When you are ready to submit your request for approvals, please allow sufficient time prior to the application deadline. Since a committee of faculty reviews the course descriptions and information, please submit materials at least two weeks in advance of your application deadline.

**Australia**
University of New South Wales

**France**
Georgia Tech—European Campus
Ecole Centrale—Paris

**Germany**
RWTH Aachen

**Hong Kong**
Hong Kong Polytechnic University

**Israel**
Technion

**United Kingdom**
Queen Mary
The University of New South Wales (UNSW) is one of the leading teaching and research universities in Australia, and is renowned for the quality of its graduates and its commitment to new and creative approaches to education and research. UNSW has close to 40,000 students, including over 7,000 international students from over 177 countries, and an additional 1,900 international students in pre-University programs. Located in Sydney, UNSW is situated near the business hub of Australia's largest city, providing easy access to a wide range of academic, cultural, and social activities, and is less than 5 km from some of the most famous beaches in the world. The 38-hectare Kensington site, the main UNSW campus, consists of state-of-the-art faculty and service facilities that provide an ideal educational and communal environment.

**Optimal Study Period:**

Junior year: Fall or Spring  
Senior year: Fall

**Contact:**  
CMU Study Abroad

**Program Type:**  
University-Sponsored

**Calendar: (opposite CMU)**  
Semester 1: Late March – Late June  
Semester 2: Late July – Mid-November (approximate)

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester</th>
<th>Easy to Transfer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design I</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>DSC</td>
<td>Semester 1</td>
<td>Probably</td>
</tr>
<tr>
<td>Dynamics, Fluid Mechanics</td>
<td>Semester 1 (not correct term)</td>
<td>Probably</td>
</tr>
<tr>
<td>Heat Transfer</td>
<td>Semester 2</td>
<td>Probably</td>
</tr>
<tr>
<td>Lab Class</td>
<td>Semester 2</td>
<td>Possibly</td>
</tr>
<tr>
<td>Numerical Methods</td>
<td>Semester 2</td>
<td>Probably</td>
</tr>
<tr>
<td>Statistics</td>
<td>Semesters 1 &amp; 2</td>
<td>Probably</td>
</tr>
<tr>
<td>Stress Analysis</td>
<td>Semester 1</td>
<td>No</td>
</tr>
</tbody>
</table>
This Lorraine campus opened in 1990 for graduate education. Initially, only an undergraduate summer program was offered in electrical and computer engineering and in mechanical engineering, management, and international affairs. Undergraduate course offerings in both semesters, taught in English by Georgia Tech faculty.

The Metz Technopôle, where Georgia Tech Lorraine is located, houses several educational institutions, government research laboratories and technology campuses. GTL’s state-of-the-art building contains 50,000 square feet of classrooms, computer labs, and research facilities. Student residences, also located on the Metz Technopôle, offer private rooms organized in small clusters, often with cooking facilities.

**Optimal Study Period:**
Fall or Spring
Summer Program

**Contact:**
CMU Study Abroad
Application information available on the website

**Program Type:**
External

**Calendar:**
Fall: August 21-December 15 (approximate)
Spring: January 7 – April 25 (approximate)
Summer program also available

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester</th>
<th>Easy to Transfer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSC</td>
<td>Fall / Spring</td>
<td>Probably- ck distance learning</td>
</tr>
<tr>
<td>Fluid Mechanics</td>
<td>Spring</td>
<td>Probably (ME 3340)</td>
</tr>
<tr>
<td>Heat Transfer</td>
<td>Fall/Spring</td>
<td>Probably (ME 3345)</td>
</tr>
<tr>
<td>Statics</td>
<td>Fall</td>
<td>Probably (COE 2001)</td>
</tr>
<tr>
<td>Statistics</td>
<td>Fall / Spring</td>
<td>Probably (fills 36-220 slot)</td>
</tr>
<tr>
<td>Stress Analysis</td>
<td>Spring</td>
<td>Probably (COE 3001)</td>
</tr>
<tr>
<td>Thermodynamics</td>
<td>Fall</td>
<td>Probably (ME 3322)</td>
</tr>
</tbody>
</table>
The École Centrale des Arts et Manufactures was founded in 1829 by four prominent figures: Alphonse Lavallé, Jean-Baptiste Dumas, Théodore Olivier and Eugène Péclet to provide engineers with a solid training in both industry and the sciences. Today it is known for its high level teaching programs, a low teacher/student ration, integrated and flexible education methods, a long history of links with industry, and advanced research. The campus is small (1800 students) and is located about 30 minutes by public transportation from the heart of Paris.

Some French language is required- there is a 1-2 month language program available prior to the course of study.

**Optimal Study Period:**
Summer Program

**Contact:**
CMU Study Abroad
Application information available on the website

**Program Type:**
External

**Calendar:**
Fall:
Spring
Summer program

**Courses:**
If you are interested in this school for semester study, please check with Bonnie or BJ. The language of instruction is primarily French. A few classes, such as Heat Transfer, are taught in English, as are several Mechanical Engineering electives. More information on the program may be found on their website.
With 260 institutes in nine faculties, RWTH Aachen University is one of Europe's leading institutions for science and research. Currently around 31,400 students are enrolled in over 100 academic programs. Aachen is a beautiful historic and friendly city located on the border in the western part of Germany, adjacent to the Netherlands and Belgium.

**Optimal Study Period:**
Junior year: All year - Basic German is required

**Contact:**
CMU Study Abroad
Chemical Engineering

**Program Type:**
University- Exchange- Chemical Engineering- Deadline Jan 5 for fall arrival
External (Free-mover)

**Calendar:**
All year: September language course (recommended); Oct 1-July- examination period could extend into late August.

<table>
<thead>
<tr>
<th>Course</th>
<th>Easy to Transfer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSC</td>
<td>Probably - English- very difficult course</td>
</tr>
<tr>
<td>Dynamics</td>
<td>Probably- taught in German</td>
</tr>
<tr>
<td>Heat Transfer</td>
<td>Probably- undergrad- German- Grad level-</td>
</tr>
<tr>
<td></td>
<td>English</td>
</tr>
<tr>
<td>Numerical Methods</td>
<td>Probably- English</td>
</tr>
</tbody>
</table>

**Summer Research**
UROP International in Aachen consists of three elements: the program’s core, a research internship carried out in a research facility or lab at RWTH Aachen University, supervised by academic staff, research-related field trips, an intensive German language course, and leisure time activities to introduce students to German science, history and culture and get them in contact with German and international students. More information at the program website: [http://www.rwth-aachen.de/urop](http://www.rwth-aachen.de/urop)
Located in one of the most fascinating cities in the world, Hong Kong is literally a gateway to the Chinese mainland and living here will offer wonderful opportunities to travel to China as well as the rest of Asia. The campus is located right in the heart of Hong Kong with easy access to key districts and major attractions. The Engineering School was one of the three disciplines areas that The Hong Kong Polytechnic University offered during the inception phase in 1937 by its predecessor The Government Trade School, and has long been one of the major discipline areas of this Institution. Total enrollment at PolyU exceeds 28,000 students. Except for Chinese-related subjects and specially approved programs, English is used for classes, written assignments and examinations.

**Optimal Study Period:**
Sophomore year: Spring  
Junior year: Fall, Spring

**Contact:**
CMU Study Abroad

**Program Type:**
External

**Calendar:**
Fall- late August to Dec 20 (approximate)  
Spring- mid January to early June

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester</th>
<th>Easy to Transfer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSC</td>
<td>Spring</td>
<td>Probably</td>
</tr>
<tr>
<td>Stress Analysis</td>
<td>Spring</td>
<td>Probably</td>
</tr>
<tr>
<td>Fluid Mechanics</td>
<td>Spring</td>
<td>Probably</td>
</tr>
<tr>
<td>Heat Transfer</td>
<td>Fall</td>
<td>Probably</td>
</tr>
<tr>
<td>Dynamics</td>
<td>Fall</td>
<td>Possibly</td>
</tr>
<tr>
<td>Numerical Methods</td>
<td>Fall</td>
<td>No- too advanced</td>
</tr>
<tr>
<td>Design I</td>
<td>Spring</td>
<td>Probably two classes to fill</td>
</tr>
</tbody>
</table>
The Technion, Israel Institute of Technology, in Haifa, Israel, opened in 1924. Today it is a science and technology research university, among the world's top ten, with approximately 13,000 students. The university offers degrees in science and engineering, and related fields such as architecture, medicine, industrial management and education in an intellectually invigorating environment. Great emphasis is also placed on its humanities and social science programs, the incorporation of which take on ever-increasing importance in today's multi-faceted workplace. But Technion's goals go beyond providing a well-rounded technical education. At the institute, scientific instruction is interwoven with professional ethics, producing leaders sensitive to social and environmental issues.

**Optimal Study Period:**
Sophomore year- Spring-
Junior- Spring

**Contact:**
Technion International School of Engineering
http://www.iee.technion.ac.il/

**Program Type:**
University-Sponsored

**Calendar:**
Winter- October-February
Spring-February-July

<table>
<thead>
<tr>
<th>Course</th>
<th>Easy to Transfer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress Analysis</td>
<td>Probably- taught in English</td>
</tr>
<tr>
<td>Dynamics</td>
<td>Possibly; taught in Hebrew</td>
</tr>
<tr>
<td>Fluid Mechanics</td>
<td>probably , taught in English</td>
</tr>
<tr>
<td>Heat Transfer</td>
<td>Probably, taught in spring semester in English</td>
</tr>
<tr>
<td>Numerical Methods</td>
<td>Probably- taught in English</td>
</tr>
</tbody>
</table>
Queen Mary, University of London is one of London and the UK’s leading research-focused higher education institutions. Amongst the largest of the colleges of the University of London, Queen Mary’s 2,800 staff deliver world-class degree programs and research across a wide range of subjects in the Humanities, Social Sciences and Laws, Medicine and Dentistry, and Science and Engineering

**Optimal Study Period:**
Junior year: Fall

**Contact:**
Arcadia University
www.arcadia.edu/abroad/default.aspx?id=6840

**Program Type:**
External

**Calendar:**
Fall: Mid-September to Mid-December
Spring: Early January to Early June (including exam period)

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester</th>
<th>Easy to Transfer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Transfer</td>
<td>Fall</td>
<td>Probably</td>
</tr>
<tr>
<td>DSC</td>
<td>Spring</td>
<td>Possibly</td>
</tr>
<tr>
<td>Dynamics</td>
<td>Spring</td>
<td>Possibly</td>
</tr>
</tbody>
</table>
Summer Suggestions

Summer is a great time to pick up some general education classes or electives. Since the requirements are much more flexible, the world is open to you! Check with the study abroad office, attend the study abroad fair and search the internet for exciting places to study and visit around the world. There are specific summer CMU funding opportunities through the Tartans Abroad Fund, CIT Travel Grant Program, the Modern Language Department Scholarships and the Jennings Family Brave Companions Fund, as well as the Mechanical Engineering Department.

Summer Study Abroad schools Mechanical Engineering students have attend in recent years include:

- Saint Louis University- Madrid
- University of New South Wales (specifically the 6 week Energy course)- Australia
- Georgia Tech Metz Campus- France
- National University of Singapore (specifically the 3 week Design course)- Singapore
- University of Auckland- New Zealand
- Ecole Centrale- Paris France
- Modern Language programs in China and Spain
- Temple University- Japan
- University of Stirling, Scotland
- Cambridge University- United Kingdom
- University of Oslo International Summer School- Norway
- Goethe Institute- Germany
- Grenoble Institute of Technology- France
- Danish Institute (DIS) –Denmark
- Semester at Sea