Study Abroad: How to Choose Classes

Copenhagen (UCPH & DTU), Edinburgh, Melbourne, and UCL
Requirements for All Programs

• Students must take at minimum of 18 units (2 to 4 classes based on credit/unit system of partner university) for credit related to their option – can be a required class or elective/broadening option credit.

• If you have a double option, then the 18 credits will be in what you consider your primary STEM option-can’t split 9 & 9.
Requirements for All Programs

• Must take at least 36 Caltech units and minimum of 4 classes with max of 5 if allowed.

• (6 sometimes allowed where classes are offered that are less than 9 unit equivalents, e.g., 3 or 6 – primarily occurs at Cambridge in certain subjects such as CS or physics to achieve the 36 unit minimum.

• No need to get professor/instructor’s approval for courses at this point. (This happens after selection into a program.)
GPA Info

• GPA recommendations above minimums.
• Note that DTU, Edinburgh, Melbourne, & UCPH are 3.0 minimum
• Cambridge: 3.6 cum GPA minimum & 3.7 and up in option classes/tripos classes. Math at Cambridge 3.8+. Should have taken Analysis!
• Cambridge: Chemistry Part III – need 3.8+. These are master’s level classes – need background & good work ethic.
GPA Info Continued

• UChicago: 3.5 for all subjects

• Ecole Polytechnique 3.3 in all subjects
UCL GPA Info

• UCL: 3.3 stated minimum for CS plus strong reference letters, **but 3.9+ needed**
• UCL: 3.5 minimum for Biomedical Sciences & background in physiology, anatomy, etc.
• 3.3 for Neuroscience & background (**Not CNS**)
• UCL: 3.5 for Biological Sciences
• UCL: Molecular Biosciences is 3.3
• All other UCL fall admit subjects require 3.3
Degree Structure-UK

• All English undergrad degrees are 3 years long – only 3 years of classes can have +1 or 2 for master’s. UCL only Mech E students can take master’s classes in mechanical engineering.

• Cambridge – all biology subjects only 3 years, math only 3 years, CS 3 years, all other NatSci subjects and Engineering, include Chem Eng are 3 undergrad plus 1 master’s. Caltech students can take 4th year master’s classes.

• Scotland (Edinburgh) – all degrees are 4 year undergrad.
Degree Structure-Denmark

- Denmark (U. Copenhagen & DTU) – first 3 years are undergrad. Last 2 master’s. 4\textsuperscript{th} year coursework for master’s. 5\textsuperscript{th} year thesis. Can take master’s classes, like Caltech 100 level
- UCPH — natural sciences and computer science. Can take 4\textsuperscript{th} year master’s classes, like 100 level
- DTU — engineering science, but also space sciences, computer sciences, physics, chemistry, math, management engineering, energy, bio-sustainability and bioinformatics, etc.
Degree Structure Melbourne

• Melbourne Science — B.S. has over 41 majors in science and engineering fields
• 3 Year Degree, option to extend for 4\textsuperscript{th} year
• Go to this link for majors — called \textit{SUBJECTS}: https://coursesearch.unimelb.edu.au/undergrad/1510-bachelor-of-science
• If you have an official option in HSS you can apply in that option to Melbourne
Make sure you have the background for classes

• In most universities abroad students are admitted **IN** a specific subject.

• They are not required to take HSS classes and HSS students don’t take STEM classes.

• Universities abroad have DEPTH study & university study is not WELL-ROUNDED, breadth study.

• This means students have **much more content background** their field.
Course Background Continued

• For example, you won’t be allowed by our partner university to take a 3\textsuperscript{rd} year class on Emotional Themes in Victorian Literature, unless you have a general British lit survey class & a specific survey class on Victorian Lit. Upper level classes may require 3 to 4 graded B or better (not frosh hum) classes – depends on program.
Course Background Continued

• BEM/Econ classes – need not only EC 11 & Accounting – 3<sup>rd</sup> year business or econ students will have 8 to 12 classes in their major.

• BEM is not equivalent to an economics major
Copenhagen: DTU & UCPH
Copenhagen: DTU & UCPH (aka KU)

• Students are admitted to either DTU or UCPH, & take all science or engineering classes at admitting university – can’t mix, ~35 ECTS max

• ...except Danish Language, all students take at UCPH for credit. And DTU students may also take a Danish Culture class. (DTU Danish class is not taught for credit.)

• UCPH students must take Danish Language & a Danish Culture class.

• Note that DTU has many management type classes & also has a History of Technology class.
Danish Culture Classes

- Both UCPH based and DTU based students must take Danish Language at UCPH & as noted UCPH based students must also take a Danish Culture class (gets HSS credit).
- We have arranged a new opportunity for DTU based students: **Optional Danish Culture class**
- Topics Include: Danish Cinema, Nordic Mythology, Danish Architecture & Urban Design, Danish Culture, Søren Kierkegaard, Sustainable Denmark. (3 DTU classes + DL & DC class)
E = Autumn and F = Spring

• E means autumn (efterår) and F means spring (forår). Be sure you are in the correct semester!
UCPH Option Subjects

• **UCPH Subjects:** Biology, Chemistry, Computer Science, Environmental Sciences, Geological Sciences, Mathematics, Physics (Nils Bohr Institute). Econ possible, but very hard to get into. Must be 3rd year & have econ major option
DTU Subjects

- **DTU Subjects:** Natural Sciences & Engineering: Bioengineering, Bioinformatics, Chemical & Environmental Eng, Bio-Sustainability, Micro & Nanotechnology, Applied Math, Computer Science, Systems Biology, Physics, Transport, Food Science, Photonics, Space Sciences, Wind Energy, & **Mgmt Eng (BEM)**

- Awesome History of Technology class
Copenhagen: DTU & UCPH Credit

- ECTS = European Credit Transfer Credits
- DTU: classes are usually 5 or 10 ECTS. Both = 9 Caltech unit unless you are trying to get credit for a 12 unit CIT equivalent class.
- UCPH: classes are 7.5 or 15 ECTS. (But must opt for two 7.5 class 1st block & one 7.5 second block class
- **Max of 5 classes & ~35 ECTS** including Danish Language or Culture & **Minimum 30 ECTS**
Block Systems Differ

• Both universities have something called a **Block System**, but that means something different at each...
UCPH: Block System

- **UCPH’s semester in science is composed of 2 teaching blocks in STEM:**
  - Block 1, Sept – mid Nov. with 1 week break, mid October (Potato Week)
  - Block 2, Mid Nov.- January
- Exams are given at the end of each block.
- Students choose **two** 7.5 classes in Block 1 and **one** 7.5 class in Block 2. At least two classes (18 CIT units) must qualify for option elective or requirement credit. *(Why ONE class only in Block 2? - due to exam prep)*
- Students also take Danish Language and a Danish culture course if UCPH Admitting University.
UCPH Block System

- Teaching for UCPH courses will take place in a given timetable group or possibly a sub group. Please note that if your course is in timetable group A, this means that the teaching will take place in both sub groups A 1 and A 2.

- The sub groups, and, thereby, the timetable groups, are organized according to the following model on the next slide:
The sub groups, and thereby the timetable groups, are organized according to the following model:

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<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
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<td>Lunch Break</td>
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DTU: Block System

• The DTU weekly schedule is composed of ten teaching blocks.
• Each block is 4 hours long 8am to noon or 1pm to 5pm: Lecture/coffee break/lecture & discussion/break/problem or project session with faculty member attending
• Each 5 ECTS class is taught in one 4 hour block.
• Each 10 ECTS class is taught in two 4 hour blocks, but not on the same day.
Bachelor’s vs Master’s Classes

• Bachelor’s classes are first 3 years of program. Most Danish students opt to do 3+2 additional years to get a master’s with the 5th year for a thesis.

• The 4\textsuperscript{th} year classes are master’s level (equivalent to senior/1\textsuperscript{st} year grad level) open to qualified Caltech students.

• When choosing classes pay attention to the term taught (fall only) and to the level of class, e.g., Bachelor’s or Master’s.
Questions?

• Please ask – we know this is complicated.
Edinburgh
Edinburgh

• College of Science & Engineering (CSE)

• College of Arts, Humanities & Social Sciences (CAHSS) (Can apply in HSS subject if you have an option & are VERY well prepared!)

• College of Medicine & Veterinary Medicine (Visiting students cannot be admitted to or take classes in this college.)
Edinburgh

- Each College is made up of **Schools**
- There are 20 schools total & some have some or several subjects

- Find classes at the DRPS: [http://www.drps.ed.ac.uk/19-20/](http://www.drps.ed.ac.uk/19-20/)

- Visiting Student Course Finder [https://www.ed.ac.uk/global/study-abroad/course](https://www.ed.ac.uk/global/study-abroad/course)
Edinburgh

- **Schools – College of Science & Engineering**
  - Biological Sciences
  - Chemistry
  - Engineering – ME, Chem E, EE, Civil, etc.
  - GeoSciences – Geology, Ecology, Envir. Sci, Geography (Geography = SS)
  - Informatics (Computer Science)
  - Mathematics
  - Physics and Astronomy
Can apply in CAHSS if you have an option in the school
Need ~ 8 minimum graded upper level classes or take 1 or 2 classes for HSS units

- **Schools College of Arts, Humanities & Social Sciences**
- Art (Limits on what visitors can take)
- Divinity
- Economics
- Education
- Health in Social Science
- History
Schools: College of Arts, Humanities & Social Sciences continued

- Classics and Archaeology
- Law
- Literatures,
- Languages and Cultures
- Philosophy
- Psychology and Language Sciences
- Social and Political Science
College of Science & Engineering

• Admitted to College of Science and Engineering (CSE)
• Max of 20 credits in College of Arts, Humanities and Social Sciences (CAHS) – usually one 20 credit class, can take two 20 credit HSS classes if you have 40 credits in the CSE
• (Geography in Geosciences can count for SS)
• Take minimum of 4 classes and minimum of 60 Edinburgh credits. Take max of 80 credits & 5 classes from all Colleges.
Edinburgh

- Some CSE subjects are 20 credits per class, while some are 10. (HSS type classes typically 20 credits)
- Only choose **Semester 1** classes – not Semester 2 or full year classes because you can’t take the exam! It is given in May!!
- Check availability in course description: must say *Open to All Students and be Semester 1.*
- *Check prereqs!*
What do the availability codes mean mean?

- **SV1** – available to visiting students – *check semester class is taught* – MUST BE SEMESTER 1
- **SS1** means that visiting students *cannot* take an SS1 class – usually field classes or yearlong project classes.
- **VV1** – available to visiting students, but need to check if *taught in Semester 1 & has Dec. exam*.
- Don’t try to make deals about exam timing!
Edinburgh

• Courses are designated by level: 8, 9, 10, 11
• For HSS courses, choose level 8 (intro) unless you have significant background in the specific subject-upper level usually require 3 or 4 graded upper level classes
• Courses taken by 3rd and 4th year students are usually level 9 and above.
Edinburgh

- **PREREQUISITES** – Noted on each class description. When prereq indicates *visiting students not required to have the prereq* – This ACTUALLY means you need to have taken a *similar* class at Caltech. You are NOT exempt! Obviously you cannot have taken the Edinburgh class since you were not there to do so.
Credit Codes

• SCQF = Scottish Credit and Qualification Framework (Look for SCQF 10 or 20)
• **CAUTION** – *do not* pay attention to the ECTS credit code, applies only to European visitors.
• For example, could see SCQF 20 and ECTS 10, or SCQF 10 and ECTS 5.
• Look ONLY AT THE SCQF. All classes = 9 CIT units
School of Biological Sciences

• Biochemistry
• Biology
• Biotechnology
• Cell Biology
• Developmental Biology
• Ecology
• Evolutionary Biology
• Genetics
• Immunology
• Molecular Biology
• Molecular Genetics
• Plant Science
• Zoology
School of Biological Sciences

• Some subjects do not have intro levels, e.g., Biochemistry starts at level 10.
• 10 is the top level for undergrad classes – you cannot take postgraduate classes
• You must have the prerequisites to take level 10 classes
• Not all level 10 classes are available to visiting students
School of Chemistry

• Chemistry
• Chemical Physics
• Levels are 8, 9, 10 & 11
• Some level 11 classes are available to all students, but must be Semester 1 and have a December exam or assessment.
School of Engineering

• **Classes are 10 or 20 credits.** 9 Caltech units are given to both 10 and 20

• Chemical Engineering (levels 8 -11)- level 8 only 2\textsuperscript{nd} Semester as students take core science Semester 1.

• Civil – level 8-11 & SV1 level 11 are available

• Electronics – (EE) levels 8-11

• Management only a few of these 8-10 and Level 11 in 2\textsuperscript{nd} Semester

• Mechanical has levels 8-11 and level 11 available
School of Engineering Continued

• School of Engineering – redundant name – has yearlong project classes visitors cannot take.
Engineering Class Choice Factors

• Mech E has sustainable energy classes & lots of project and design classes
• Chem Eng has design and project classes open to fall exchange students
• Electronics (EE) 8 to 11 and several design and project classes open to visitors, e.g., Electronic Product Design and Manufacture
School of Geosciences

- Earth Science
- Ecological Science
- Environmental Courses
- Geography
- Geosciences
- Meteorology
School of Geosciences

• Very broad department, encompassing human geography, econ oriented classes, environmental science, and geology/geochemistry

• Geography has Social Science-type classes, e.g., Economic & Political Geography

• Postgraduate classes may be available to visiting students – depends on your background
School of Informatics

- Informatics 8-11
- *Dozens* of classes taught each semester!
- Can take classes at level 11.
- Many classes are 10 Edinburgh credits = 9 CIT units
- Classes in design, machine learning, human-computer interaction, robotics, etc.
School of Mathematics

- Mathematics 8-11
- Both pure and applied math
- Most level 11 classes are not open to visitors as they are only open to students in the graduate program, i.e., MIGSAA = Maxwell Institute for the Mathematical Sciences
School of Physics & Astronomy

- Levels 8 through 11
- Level 11 classes are usually open to undergraduates.
- Astronomy can work well for GPS Planetary Science option students
Edinburgh Points to Remember

• Classes must be SV1 or VV1 and Open to All Students (NOT SS1)
• Classes must be taught in Semester 1
• Can take 20 Edinburgh Credits in the College Humanities and Social Science-40 allowed if you have 40 credits in CSE
• Take min. 4 classes & max 5/60 credits (max of 80 credits)
Questions?
(King’s Building’s- STEM campus 114 acres)
Melbourne
Melbourne

• All subjects (classes) are 12.5 points each
• Can take max of 50 points – no more! At least 50% (18 credits min) of classes in option
• Can do 25% of classes as research class & Melbourne offers topics so easy to arrange
• Up to 50% in other subjects in science/eng or in humanities or social – your choice.
• Choose Semester 2 subjects (classes) only
Melbourne Subject Handbook

• REMEMBER – SUBJECTS = Classes
• Courses = Degree
• https://handbook.unimelb.edu.au/subjects/undergraduate
• Choose **Semester 2** Choose Undergraduate Subjects
• Choose Subject Study Area, Faculty & Depts.
Questions?
(Yarra River - CBD)
University College London
UCL

- No course catalog have to search by Subjects:
- Admitted to one department (Admitting Dept.) MUST TAKE 50%
- In Science, Engineering, Humanities and Social Sciences 15 credits is one class
- Restriction on which subjects admit fall only students
UCL Subject/GPA Restrictions

- UCL STEM departments that accept **fall only** students:
  - **BIOLOGICAL & LIFE SCIENCES**
  - Biomedical Sciences - 3.5 GPA & have extensive background
  - Biomolecular Sciences 3.3 GPA
  - Biological Sciences 3.5 GPA
  - Neuroscience 3.3 GPA
Physical Sciences

- Chemistry 3.3
- Earth Sciences 3.3
Engineering/Applied Science Subjects admitting fall students

- Computer Science 3.3 – but usually 3.9+ needed to be admitted & that is not a guarantee. CS only admits a limited number of students.
- Civil, Environmental and Geomatic Engineering 3.3
- Mechanical Engineering 3.3
UCL Subject Restrictions

• Departments you cannot be admitted to or take fall classes in as exams are given in May:
• Biochemical Eng or Chemical Eng (BioE students- Molecular Biosciences & Chem E enter Chemistry)
• Electrical Engineering
• Math
• Physics & Astronomy
• Statistics
Humanities & Social Sciences

• Most allow "affiliate" students to take fall classes. Usually level 1 or 2 only
• Anthropology & Archaeology
• Economics – level 1 only
• Education
• European Languages, Culture & Society-lit classes
• European Social & Political Studies (has law & econ classes you can take)
HSS allowed subjects cont’d

• Geography
• Global Health
• Greek & Latin – Classics/Ancient World lit classes
• Hebrew & Jewish Studies- lit classes
• History
• History & Philosophy of Science
• History of Art – very popular gallery classes
• Linguistics
HSS allowed subjects cont’d

• Liberal Arts & Sciences (has some hidden gems, e.g., Science Meets Religion in the Global Community, Creative Writing, Migration & Health, etc.)

• Philosophy

• Planning

• Political Science & International Relations

• Population Health
HSS allowed subjects cont’d

• Psychology & Language Sciences
• Slavonic and East European Studies (SSEES) – has econ classes.
Restricted HSS Subjects

Cannot take class in these

• Architecture (except History of Art classes)
• Business and Management Study-no fall only
• English Literature
• Fine Art (Can take History of Art classes)
• Law-no fall only students
• UCL Centre for Languages (Can take lit classes in a foreign language or in translation in many of the area studies departments.)
UCL Subjects Not Allowed

- Students **cannot** take **English literature** classes, but can take classes in other literature departments of which there are many including the Classics, e.g., Roman Poetry, or Spanish literature, etc.
- Go to Edinburgh if you want to take English lit classes!
- Reminder – can take Econ in SEES & European & Political Studies
Area Studies

• Europen Languages, Cultures, & Society
• Greek & Latin (Classics/Ancient World)
• Hebrew & Jewish Studies
• Slavonic & East European Studies (SSEES)
• Can take econ, foreign language and in translation lit classes.

• All allow fall only students to take Semester 1 classes
Credits Continued

• Students will take four 15 classes
• **EXPRESS CLASSES IN UCL CREDITS NOT ECTS CREDITS**! Ignore the ECTS and US unit translation. Only put 15 UCL credits
• Only select Fall classes, not Year or Spring in subjects that allow fall only students
• Some subjects have fall classes, but **do not** give fall exams: math, stat sci, physics, etc.
UCL & Econ Classes

• The Slavonic & East European Studies (SSEES) teaches many econ classes e.g., *Topics in Financial Management or the Economics of Entrepreneurship*

• Only **LEVEL 1** classes can be taken in the Economics department
Questions?
How to get find classes

• KU: http://kurser.ku.dk
• DTU: http://www.kurser.dtu.dk/
• Ecole Polytechnique: https://moodle.polytechnique.fr/course/index.php
• Choose current academic year & 3A for class level
• Edinburgh: http://www.drps.ed.ac.uk/19-20/ OR Course Finder https://www.ed.ac.uk/global/study-abroad/course
• Melbourne: https://handbook.unimelb.edu.au/faces/htdocs/user/search/SimpleSearch.jsp (Semester 2 ONLY) Click Show All. Pick SUBJECTS – don’t pick COURSES (degree programs)
• UCL: https://www.ucl.ac.uk/prospective-students/study-abroad-ucl/study-abroad-guide/subjects
Course List & Proposal Examples

• These are in our office library, room 319.
• You can look at them by option and then see all the programs that student applied to and get more ideas.
• Remember that you always need to check the course catalog of the host university
• After program selection you are allowed to change classes via a petition/ approval process
Questions

• Har du et spørgsmål om disse oplysninger? *(Danish)*
• G’day, mate, do you have a question? *(Australian)*
• Do you, per chance, have a question about what we have discussed thus far? *(Real English)*
• Dae ye hae a quaistion aboot this speirins? *(Scots)*