

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. 4th year coursework for master's. 5th year thesis. Can take master's classes, like Caltech 100 level
- UCPH — natural sciences and computer science. Can take 4th 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 4th year
- Go to this link for majors – called ***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 3rd 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 – *3rd 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:

Subgroups for Block System UCPH

The sub groups, and thereby the timetable groups, are organized according to the following model:

	Monday	Tuesday	Wednesday	Thursday	Friday
08:00-10:00	B ₁	A ₁	C ₁	A ₁	B ₁
10:00-12:00		A ₂			B ₂
Lunch Break					
13:00-15:00	C ₁	B ₂	C ₂	A ₂	D
15:00-17:00	C ₂				

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 4th year classes are master's level (equivalent to senior/1st 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/>
- Visiting Student Course Finder
<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 hae 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 2nd 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 2nd 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

- European 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)