2025

Cambridge Course Choice

General Info

- Start application early
  - need to spend time learning & understanding the subject/tripos system
- You need to apply to at least one alternative to be considered for Cambridge
- a minimum 3.6 GPA is required and 3.7 GPA in your option
  - Math 3.8+ GPA
  - Chemistry Part III 3.8+ GPA

Cambridge - Good fit for you?

- Cambridge has supervisions that are part of the program that require you to speak up and engage fully with professor & classmates
  - are you okay with this?
- Strong reference letters from instructors in your option (Letters will be sent to Cambridge)
- Enjoy traditions and lots of rules

2nd Choice Program

- You must apply to a second choice program
- Michaelmas (Fall) - 6 spots
- Lent (Winter) - 4 spots
  - You can apply to both Michaelmas and Lent
  - Still need to apply a second program
- If you don't get placed at Cambridge, you don't have to study abroad **but still should!**

2nd Choice Options

DTU

- Works well for engineering, most natural sciences, & applied math

Chicago

- 2 classes in your option
- 2 classes in other STEM or HSS

Edinburgh

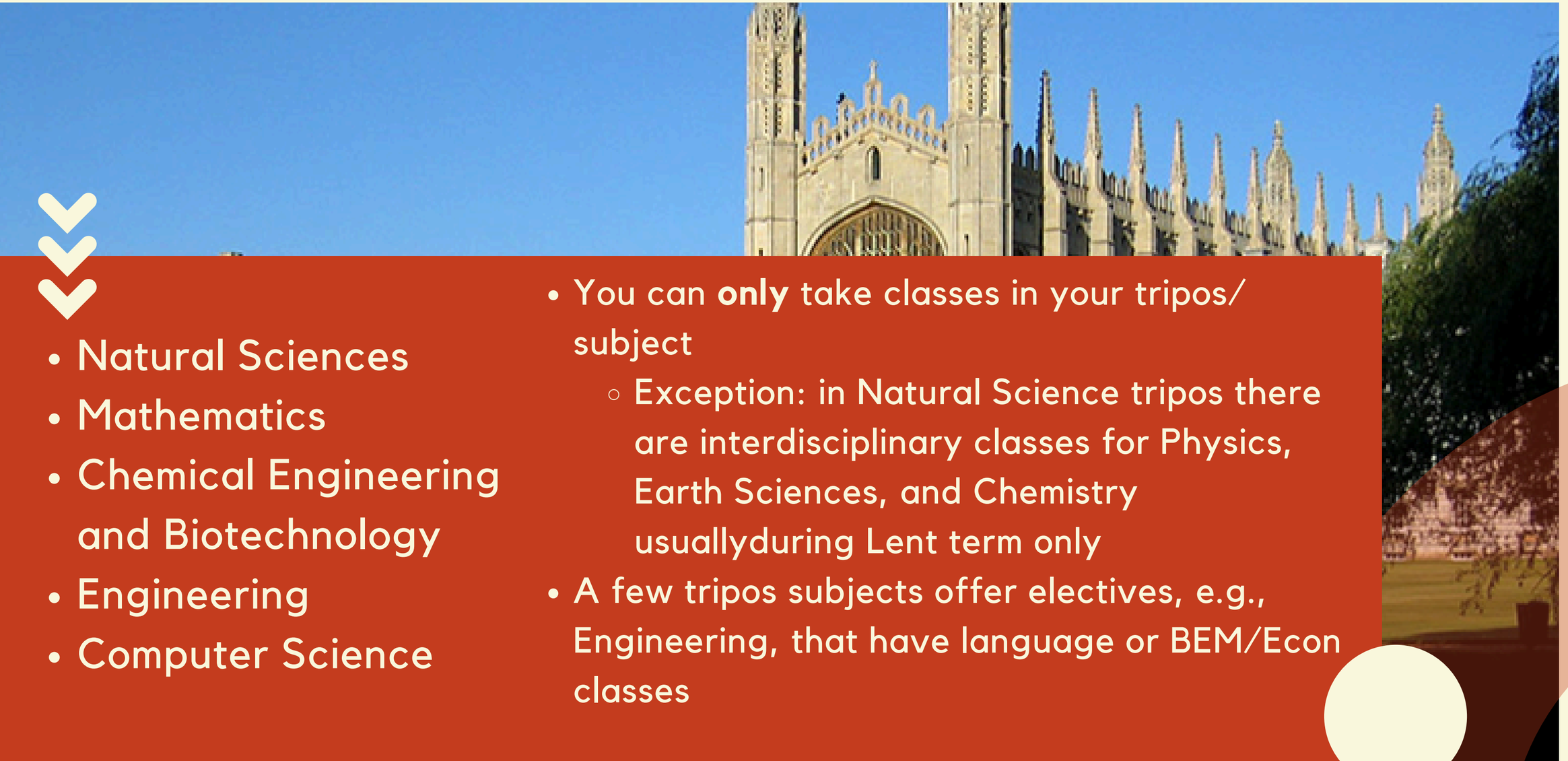
- Same feel as Cambridge
  - Ancient university in beautiful, walk-able, small city
- Great academics that works for most options
  - CS, ME, EE, Physics/ Astrophysics, GPS. Biology, Chemistry, MechE, Math etc)
- You can take HSS classes - 1 or 2

UCL

- Only an hour away from Cambridge
- Can take HSS courses (up to 50% of classes)
- No Math/ACM, EE, Physics, BioE or ChemE
  - these are only available to full academic year, or spring term students only, no fall term

Tripos

Tripos or Course of Study



- Natural Sciences
- Mathematics
- Chemical Engineering and Biotechnology
- Engineering
- Computer Science

- You can **only** take classes in your tripos/ subject
  - Exception: in Natural Science tripos there are interdisciplinary classes for Physics, Earth Sciences, and Chemistry usuallyduring Lent term only
- A few tripos subjects offer electives, e.g., Engineering, that have language or BEM/Econ classes

Parts

Part 1A:

- first year

Part 1B:

- second year

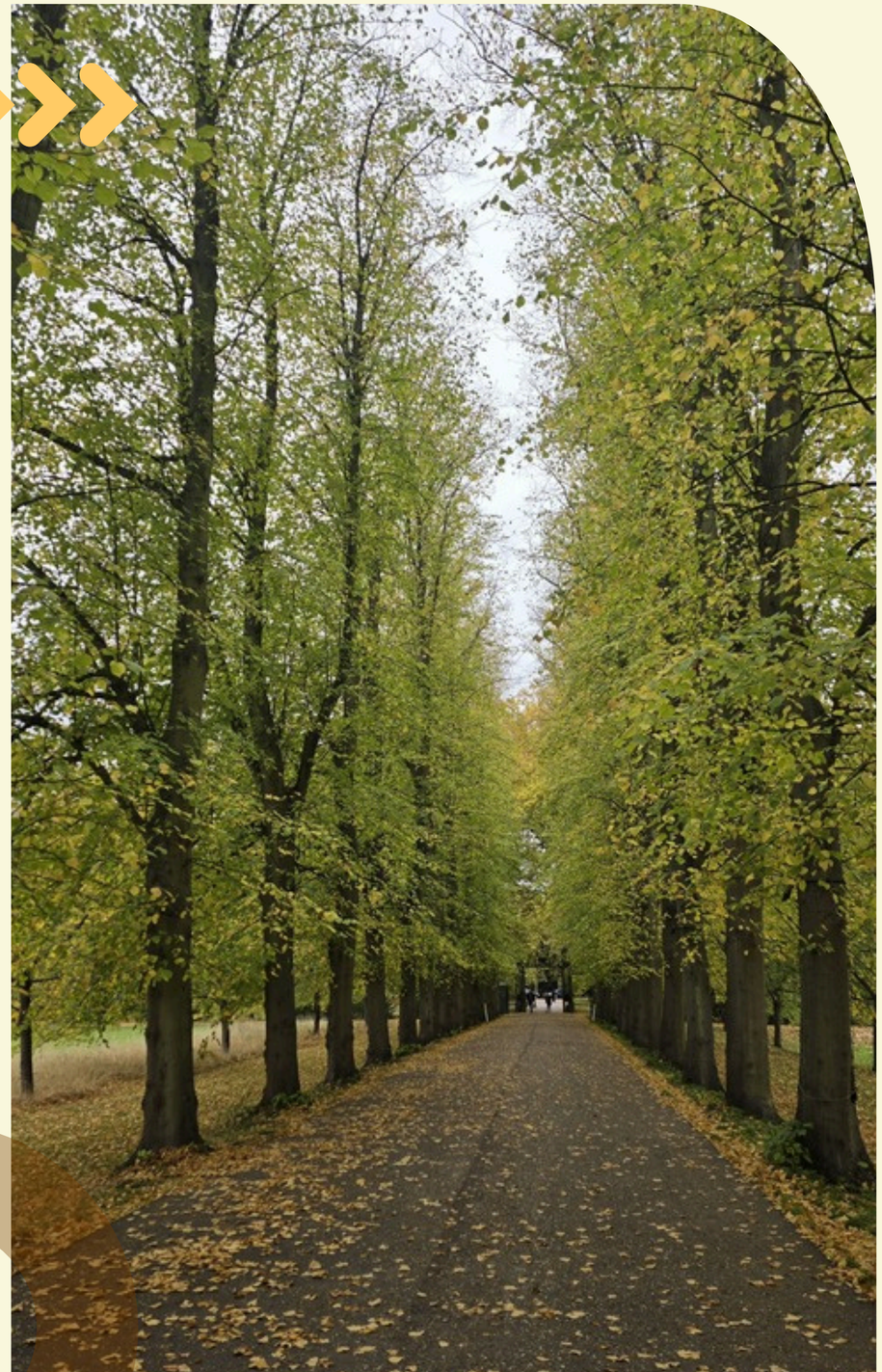
Part II and IIA:

- 3rd year

Part IIB and III:

- 4th year

*You can mix classes, just be aware of schedule clashes



Tripos Info

- In some tripos areas, the subject is the same as the tripos, ex) ChemE or CS

- In Natural Science or Engineering, there are subsets of subjects

- In the Natural Sciences you choose ONE subject,
  - ex) PDN, Neuroscience, Earth Science, Chemistry, Physics, Math, etc., with exception of max of 1 interdisciplinary class

*cannot do materials or biochemistry

Natural Science Tripos

Encompassing a wide range of subjects from biochemistry, ecology, neurobiology and genetics, to physics, chemistry, environmental and materials science

*Natural Science Tripos overview: https://www.natsci.tripos.cam.ac.uk/course-structure

Physics & Astronomy Part II or III:

- Theoretical Physics or Department of Applied Mathematics and Theoretical Physisc: Physics & Math overlap (Physics students may be able to take some Math Part II classes)
- Astronomy students may take physics classes & vice versa
- You can ONLY do one Physics Experiment per term - will not fulfill Physics lab requirement

Chemistry Part III only:

- Very challening for juniors
- ChemE is separate tripos (no mixing)
- No Biochemistry allowed

Geological Sciences Parts II or III:

- Okay to take field courses for field credit if available

Interdisciplinary Classes Part III:

- Limited to Chemistry, Geological Sciences, or Physics
  - You can propose up to 2 of these- but check schedule carefully for time conflicts with your subject

Biological Sciences

Biology:

- Part II preferred
- Some IB allowed
- Psychology, Neuroscience & Behavior (PNB)
- Physiology, Development, & Neuroscience (PDN)
- Plant Sciences & Zoology
  - only part I and II
- at least one essay a week

Not allowed:

- Anatomy, biochemistry, clinical and veterinary medicine, genetics, pathology, or pharmacology

Physiology, Development and Neuroscience vs. Psychology, Neuroscience, Behavior

- The modules that make up (PDN/PNB) are mostly shared and most from PDN, but if a student wants to do cognitive related classes then they should take PNB
- essay based classes
- no projects
- PDN website: https://www.pdn.cam.ac.uk/
- PNB website: https://www.psychol.cam.ac.uk/study/ug/nst-ii

Chemistry

Chemistry:

- Part III
- Students cannot take Part II because classes run into second term
- Part III classes are taught for 4 weeks
  - Students choose 3 classes for 6 units per class for the first half of the term
  - Choose 3 classes for 6 units per class in the second half of the term
- https://teaching.ch.cam.ac.uk/course-guides

Chemical Engineering

- Most ChemE students have opted for the engineering tripos
- Best to check classes in both ChemE and the engineering tripos

Physics

- https://www.phy.cam.ac.uk/study/undergraduate/
- Part II and III
- Only seniors or very advanced juniors should take Part III classes
  - You need to have covered standard Caltech junior year classes to take Part III
- TP 1 (Michaelmas) and TP2 (Lent) are equivalents of Physics 125 ab

Mathematics Tripos

***Including applied math**

- https://www.maths.cam.ac.uk/undergrad/course
- Can only take classes from:
  - Part IA, IB, or II only
  - Have C & D level classes - D level are harder
- You can NOT take classes from part III - graduate program
- No separate applied math dept
- Must have at least 16 lectures = 6 CIT units & 24=9 CIT units

Chemical Engineering and Biotechnology Tripos

- You can take courses in Part IIA or Part IIB – senior electives and specialization
- Some classes split into 2 sections, meaning some finish after winter break
  - You cannot take these
- Has themes such as:
  - process applications and systems
  - mathematical methods
- Many ChemE's select the Engineering Tripos or can opt for Chemistry Part III

*Old examples of syllabus on FASA website

Engineering Tripos

Has sub-groups such as:

- Group A: Energy, Fluid Mechanics and Turbo machinery
- Group B: Electrical Engineering
- Group C: Mechanics Materials and Design
- Group D: Civil & Structural Engineering
- Group E: Management and Manufacturing
- Group F: Information Engineering
- Group G: Bioengineering

- You can take courses in Part IIA or Part IIB (3rd or 4th year)
  - Must take at least 2 in IIA (IIB has no supervisions & max of 2 IIB)
  - Classes are called modules
- You can take 4-5 classes
  - At least 2 out of 4 or 3 out of 5 must be “real” engineering courses (not management, languages, etc.) and in Part IIA
  - The two Part IIA classes must be in the group equivalent to your Caltech primary STEM option
- Has BEM type classes & language classes
- Look carefully at Engineering – could be a better fit for some CS, BioEng, ChemE students than the tripos that seems to match option
  - Make sure you have the background for Part IIA or IIB
- Modules (click on parts): https://teaching.eng.cam.ac.uk/
- Timetables: https://teaching.eng.cam.ac.uk/node/4112

Computer Science Tripos

- You can take classes from any part, as long as there are no time conflicts
- Part IA is ok, but likely too easy
- Part IB is sophomore/junior level
- Part II is the 3rd year- equivalent to junior/senior
- Must have at least 16 lectures to equal 9 CIT units
- Has lots of issues as classes are taught for as few as two weeks to as many as 8.
    - You must have at least 3 classes taught at any time in the term – no clustering at the start, middle or end of term
- All parts: https://www.cst.cam.ac.uk/teaching
- Note that Part II classes are taught in a building a 20 minute walk from Part IA or IB
    - This can cause a time conflict due to the walking time
- Unit of assessment classes
    - Students can only choose 1 of these classes
    - Class is twice the workload of a regular class
    - Class has exams at end of term and often a project and no supervisions

Example of CS Schedule

Course	Time	Lectures/Supervisions	Units	Part	Week 1	2	3	4	5	6	7	8	9
Machine Learning and Bayesian Inference	TR11	16/4	9	II	■	■	■	■	■	■	■	■	
Computer Vision	TR12	16/4	9	II	■	■	■	■	■	■	■	■	
Computer Systems Modelling	MWF9	12/3	6	II	■	■	■	■					
Topical Issues	MWF11	12/3	6	II					■	■	■	■	
Databases	MWF12	12/3	6	IB					■	■	■	■	

Last Points

- Some timetables/syllabi are listed on a locked system, so you'll have to write to the department for info or check FASA website for posted materials
- Cambridge has a shorter term than other study abroad programs (good and bad)
- You can take only take classes in one tripos/subject with exception of NatSci Lent only interdisciplinary classes (propose 2, take only 1)
- You will receive NO transcript for your time at Cambridge.

Reference Letters

- Cambridge prefers professors/instructors
- 1st letter:
  - prof/instructor in your STEM option or highly related field
  - No Hum or SS letters
- 2nd letter:
  - Another Prof/Instructor in your option
  - Graduate TA's in your option or related field
  - Post-Docs you have done research with you
  - Employers in STEM related areas-research related only
  - Research supervisors
  - Your advisor or option rep – OK if that professor has not taught you as long as they know you
- These reference letters will be sent to Cambridge!

THANK YOU

Applications Due January 25, 2026