What will you choose to do next year?

Introduction to the Part II Options information presentations

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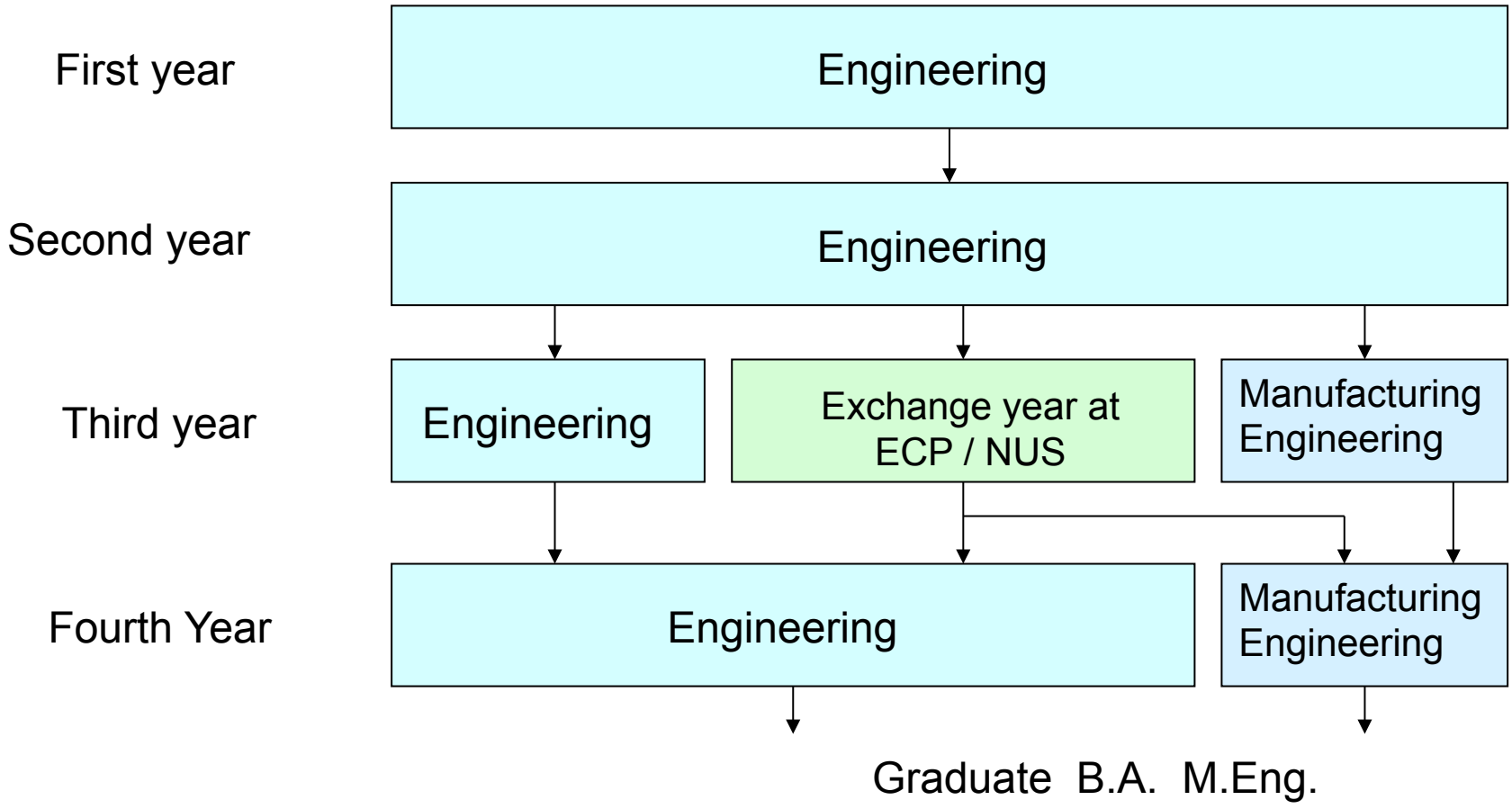
Structure of the Cambridge Engineering Course



What next?

You need to make some decisions

Questions you might ask yourself include:

What bits of the course do you enjoy and find interesting?
Are you good at them?

What do you want to do when you graduate?
What modules would help your proposed career path?

If you're intending to go into an engineering career:
Do you have a 'feel' for what skills/knowledge will be needed?

+ lots more!

How do you find out?
Options talks this term
Look at Moodle sites for modules in which you're interested (self-enrol)
Talk with other students, DoS, etc

Engineering Tripos Part IIA modules

A
- •3A1 Fluid Mechanics I (double module)
- •3A3 Fluid Mechanics II (double module)
- •3A5 Thermodynamics and power generation
- •3A6 Heat and mass transfer

B
- •3B1 Radio frequency electronics
- •3B2 Integrated digital electronics
- •3B3 Switch-mode electronics
- •3B4 Electric drive systems
- •3B5 Semiconductor engineering
- •3B6 Photonics technology

C
- •3C1 Materials and processing and design
- •3C5 Dynamics
- •3C6 Vibration
- •3C7 Mechanics of solids
- •3C8 Machine design
- •3C9 Fracture mechanics of materials/structures

D
- •3D1 Geotechnical engineering I
- •3D2 Geotechnical engineering II
- •3D3 Structural materials and design
- •3D4 Structural analysis and stability
- •3D5 Water engineering
- •3D7 Finite element methods
- •3D8 Building physics & environmental geotechnics

E
- •3E1 Business economics
- •3E2 Marketing
- •3E3 Modelling risk
- •3E5 Human resource management
- •3E6 Organisational behaviour & change
- •3E10 Operations Management

F
- •3F1 Signals and systems
- •3F2 Systems and control
- •3F3 Signal and pattern processing
- •3F4 Data transmission
- •3F7 Information theory and coding
- •3F8 Inference

G
- •3G1 Introduction to molecular bioengineering
- •3G2 Mathematical physiology
- •3G3 Introduction to neuroscience
- •3G4 Medical imaging & 3D computer graphics
- •3G5 Biomaterials

M
- •3M1 Mathematical methods

S
- •4C4 Design methods
- •4D8 Prestressed concrete
- *•4D16 Construction & management*
- •4M12 PDE's and variational methods
- •4M16 Nuclear power engineering

Engineering Tripos Part IIA – Engineering Areas

- You must choose 5 modules in each of Michaelmas and Lent Terms.
- Preliminary choices on-line (COMET) between mid-May and 10 June
- To qualify in a particular Engineering Area you need to take at least six modules from that area (details in Options Document).

  Mechanical Engineering

  Energy and the Environment

  Aerospace and Aerothermal Engineering

  Civil, Structural and Environmental Engineering

  Electrical and Electronic Engineering

  Electrical and Information Sciences (at least 8)

  Information and Computer Engineering

  Instrumentation and Control

  Bioengineering

  Engineering

- You may qualify in more than one area. But you don't have to qualify in any area, in which case your degree will be 'Engineering'.
- At the end of IIA you have fulfilled the requirements for the Cambridge BA, but you do not take your degree until after IIB when you graduate BA, MEng.

Engineering Tripos Part IIA 2016

Class I

Asbo, A.[1,2]	*COL*	Crumble, C.[3]	*COL*	Eggfroth, E.[9]	*COL*
Bimbo, B.	*COL*	Dimwit, D.[1,3,4,5]	*COL*	Floozie, F.[2,3]	*COL*

Class II
Division 1

Gormless, G.[3]	*COL*	Imbecile, I.[1,3,5]	*COL*	Krakpot, K.	*COL*
Horseface, H.[2,4]	*COL*	Jellybean, J.	*COL*	Lambkin, L.[4]	*COL*

Division 2

Munchkin, M.[1]	*COL*	Numbskull, N.	*COL*	O'Bother, O.[1,5,6,7,8,9]	*COL*

Class III

Pussycat, P.[2,3]	*COL*

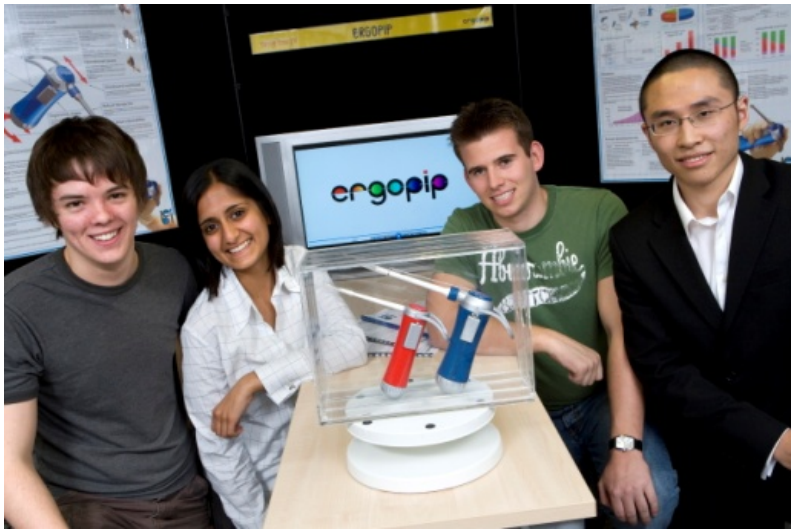
Superscripts designate candidates who have fulfilled the requirements for the following engineering areas:

1 Mechanical Engineering
2 Energy, Sustainability and the Environment
3 Aerospace and Aerothermal Engineering
4 Civil, Structural and Environmental Engineering
5 Electrical and Electronic Engineering
6 Information and Computer Engineering
7 Electrical and Information Sciences
8 Instrumentation and Control
9 Bioengineering

Engineering Tripos Part IIB

- Choose 8 modules (4+4, 5+3 or even 6+2 in Mich + Lent) from more than 80.
- Modules typically given at 2 lectures per week.
- Need at least 4 modules from a group to qualify for an ‘Engineering Area’.
- Your Engineering Areas are often the same for IIA and IIB, but don’t have to be.
- Major individual project runs throughout the year.

Manufacturing Engineering Part IIA



Manufacturing Engineering Part IIB

Accredited by all major Engineering Institutions

All require two management (usually Group E) modules during two years of Part II. ICE/IStructE allow 4D16 (currently offered every other year).

Main Engineering Course accredited by:

- Institution of Civil Engineers
- Institution of Structural Engineers
- Institution of Highways & Transportation
- Institution of Engineering & Technology
- Royal Aeronautical Society
- Institution of Mechanical Engineers
- Institute of Measurement and Control
- Institute of Physics and Engineering in Medicine

Manufacturing Engineering course:

- Institution of Engineering & Technology
- Institution of Mechanical Engineers

Timetable of Lent Term talks

Today	**Manufacturing Engineering Tripos**
Tuesday 14th 1.00pm	**Electrical Engineering (+ lunch!)** **Civil, Structural & Environmental Engineering** **Mechanical & Materials Engineering** **Fluid Mechanics, Thermodynamics & Energy**
Tuesday 21st 2.00pm	**Information Engineering** **Bioengineering** **Engineering Management**