

## MET: Creating future leaders

The Manufacturing Engineering Tripos (MET) is a programme that combines technology with management, and theory with application to prepare students for leadership roles in manufacturing and engineering. Non-Engineering (i.e. Natural Sciences, Medical Sciences and Veterinary Science students) can take just one year (third year which is Part IIA) of the two-year MET programme. There is no option for Non-Engineering students to take the second year (Part IIB). The MET course will develop your understanding of how the technology, financial, organisational and human aspects of firms work. This spans all aspects of the firm, from the design of new products, materials and production technologies, industrial engineering, through to marketing, business strategy and operations management. The MET course is based in the Institute for Manufacturing (IfM), Alan Reece Building at the West Cambridge site.

### Application and Selection

Selection for MET is based on the candidate's potential to thrive on the course. The qualities being sought include:

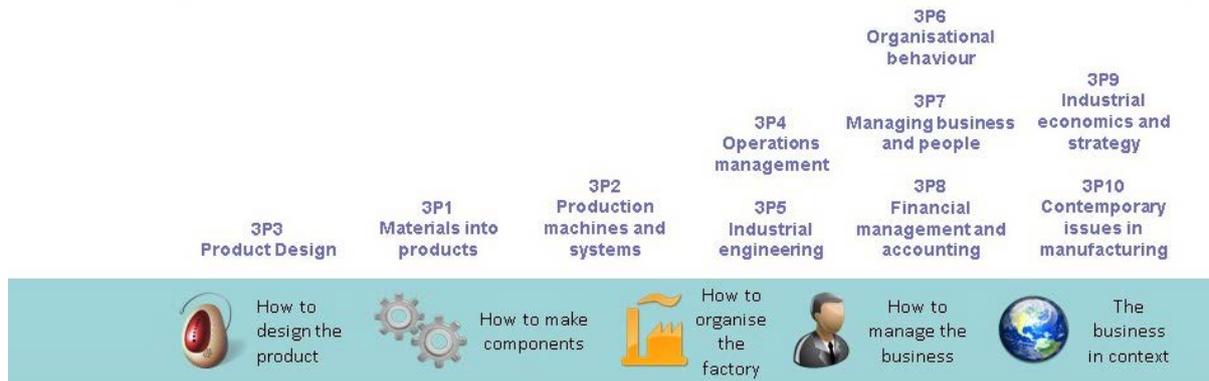
- **Technical knowledge and abilities:** materials, design, production methods
- **Personal skills:** enthusiasm, communication, organisation, teamwork, and an ability to work to tight deadlines
- **Leadership potential:** in industry, management, manufacturing and commerce

All candidates must complete an application form and we will also look at your academic track record and your reference from your Director of Studies. All candidates will be invited for a short interview. If you are interested in applying, please complete the application form and return it to the IfM Teaching Office by **Monday 25 May 2026** at the latest. Interviews will be held **mid-June 2026**. We will let you know the result of your application soon after the IB examination results are known. The application form is available here: <http://www.ifm.eng.cam.ac.uk/education/met/application/>

**Industrial Placements** - The Tripos regulations state that: 'to obtain honours in Part IIA of the Engineering Tripos or the Manufacturing Engineering Tripos, a candidate must satisfy the Examiners that he or she has such industrial or equivalent experience as shall be determined by the Faculty Board'. Students transferring MET IIA from another Tripos should seek advice from the [Industrial Placements Coordinator](#). The Coordinator will advise whether any vocational experience which they have undertaken to date can be counted towards the industrial or equivalent experience requirement. Further details can be found here - <http://teaching.eng.cam.ac.uk/node/64>

### Academic structure of the course

The course provides a sound theoretical basis in technology, manufacturing engineering and business management, coupled with the experience of putting theory into practice via the major design project. MET students develop valuable skills in leadership, problem solving, team working, communication - 'making things happen' - which ensure they are highly prized by employers. MET demands hard work, teamwork and initiative. The course generates a high level of esprit de corps and an ethos of self-reliance, resulting in a strong sense of group identity - and fun! The graphic on the following page aims to summarise the core content of MET IIA.



The course is Cambridge-based and consists of ten modules with integrated coursework. The modules reflect the range of technical, managerial and contextual issues relevant in modern manufacturing firms and are summarised below.

A distinctive feature of the course is the Business Skills Development Programme which includes visits to leading firms, master-classes (e.g. in industrial design, patents and Intellectual Property), and personal skills development (e.g. team-working, presentation skills, time-management).

The course follows normal Cambridge terms, and has the standard undergraduate structure of supervisions. You will be based at the Alan Reece building, West Cambridge for at least half of each week. Some blocks of lectures will take place at the Department of Engineering, Trumpington Street, allowing easy access to central facilities such as libraries. Students are also offered the opportunity to gain workshop experience.

### MET IIA modules

Module number	Module Title	Module Scope
3P1	Materials into Products	From microstructure to mechanical property: manufacturing process optimisation for all classes of solids
3P2	Production Machines and Systems	The specification, operation and management of production machines and systems
3P3	Design	Integrating engineering and industrial design in the creation of new products.
3P4	Operations Management	The management of material and information flow in the supply chain
3P5	Industrial Engineering	The design of production flows and operations in manufacturing
3P6	Organisational Behaviour	An introduction to the theory of organisational behaviour
3P7	Managing Business and People	An introduction to the processes involved in starting and running a business.
3P8	Financial and Management Accounting	An introduction to the principles and practice of financial and management accounting.
3P9	Industrial Economics, Strategy and Governance	An introduction to the principles and practice of industrial economics, strategy and corporate governance.
3P10	Contemporary Issues in Manufacturing	(a) Integrative industrial visits to study modern manufacturing practice. (b) Lectures to introduce current topics.

## Integrated coursework: Major design project

The integrated coursework seeks to bring together issues from across the modules, and apply them in a practical way. This includes a major design project, a production simulation and a CAD/CAM and manufacturing exercise.

The major design project is a group project that lasts through the whole year. Groups design a new product and develop a comprehensive business plan. Professional advice is provided on how to set up and finance a small company. Some of the student groups have turned their project into reality, setting up their own companies and going into production. Projects have included the design of a pod for autistic children, a device to enable blind people to sense their environment, a water filtration system for the 3<sup>rd</sup> world, an ergonomic pipette, a novel water pistol, a 3D cinema system for the home and a device to enable deaf people to perform with music. Students are encouraged to build working prototypes to demonstrate the feasibility of their designs. The major design project concludes with a Design Show, featuring all the projects, and attended by industrialists, entrepreneurs and designers. For many students, this is the highlight of the year.

## Industrial visits

Throughout Michaelmas and Lent terms, students visit 6 companies, representing a diverse section of manufacturing in the UK. This will include: primary processes, automotive, aerospace, electro-mechanical, specialised processes (e.g. Electronics and bio-tech) and FMCG (e.g. Food and consumer goods).

## Business skills development programme

The skills development programme is a structured series of practical workshops designed to develop some of the personal skills critical for success in industry and related employment.

## Industrial Experience

Students are required to have obtained suitable industrial or equivalent experience in order to obtain honours in Part IIA of the Manufacturing Engineering Tripos as specified below:

<http://teaching.eng.cam.ac.uk/content/industrial-experience-requirements>

## For more information

For more information, please come to our recruitment event on **Wednesday 13 May 2026**. This would be an opportunity to tour the MET building (IfM, 17 Charles Babbage Road, West Cambridge CB3 0FS) and meet staff who teach the course. The event is from 1pm-2.30pm, with a MET talk at 1.15pm followed by a tour of the building.

For further details, please check out our MET Recruitment Moodle page -

<https://www.vle.cam.ac.uk/course/view.php?id=194761>

Our web pages <https://www.ifm.eng.cam.ac.uk/education/met/> include a comprehensive summary of the course. You are also very welcome to contact us directly.

### IfM teaching Office:

The MET Teaching Coordinator is Shane Strawson ([met-admin@eng.cam.ac.uk](mailto:met-admin@eng.cam.ac.uk))

Prof Alexandra Brintrup: MET IIA Course Director ([ab702@cam.ac.uk](mailto:ab702@cam.ac.uk))

Dr Letizia Mortara: MET IIB Course Director ([lm367@cam.ac.uk](mailto:lm367@cam.ac.uk))