



Imperial College
London

**Building for
our future.**

Industrial Placements

**Dyson School of
Design Engineering**
MEng in Design
Engineering

Design Engineering Placements

The Design Engineering placements scheme sends our undergraduate students out into industry for six months during their studies, as a compulsory part of their degree programme.



How your company could benefit:

The Dyson School of Design Engineering represents some of the top design engineering talent in the UK. Our Industrial Placement programme offers your organisation:

- An effective vehicle for recruiting our top graduates – recruiting a graduate who has worked with you already reduces your recruitment and training costs and may contribute to higher retention rates.
- A cost effective way of getting a project done at the highest technical standards.
- A way to exchange new ideas combined with fresh enthusiasm and knowledge of some of the latest technology.
- The opportunity to encourage and invest in design engineers of the future.

How to advertise a placement:

Once you've decided that you want to host a design engineering placement student:

1. Contact us to discuss the options and finalise details.
2. Your placement advert will be loaded onto our central database.
3. Applications will open in October and you will begin to receive enquiries from students looking for placements in the following April.

The recruitment process is at the full discretion of the company, and you will have complete freedom to use internal company procedures to process, interview and select appropriate applicants.

If required we can support this with screening and arranging interviews here at Imperial to tailor your recruitment process.

KEY PLACEMENT INFORMATION

- Placements will last a total of 6 months from April to September each year, beginning April 2021.
- Students will be coming to the end of their third year of study, and will be equivalent to BEng graduate level when they leave for placement.
- Students will be an integral member of your team, given responsibility for one or two larger scale design engineering projects.
- Students will be paid a reasonable wage for their time and contribution over the course of the placement.

Design Engineering Students

The Design Engineering undergraduate MEng programme provides students with a solid foundation in a wide-range of traditional engineering disciplines and combines these with modules in design and business to produce engineers who are able to solve problems creatively and take products from the first stages of design right through to the market.

Pragmatic Education:

The course has a particularly strong focus on the communication and translation of engineering, and the majority of the students' work is comprised of practical projects and industrially oriented modules.



'Fruit Hat' Student Induction Challenge



Service Design and Programming Project



Electronics and Ergonomics Project



People's Pod in the IDEAS Workshop



People's Pod Manufacturing Drawings



RioTinto Sports Innovation Challenge



Robotic Intelligence Lab

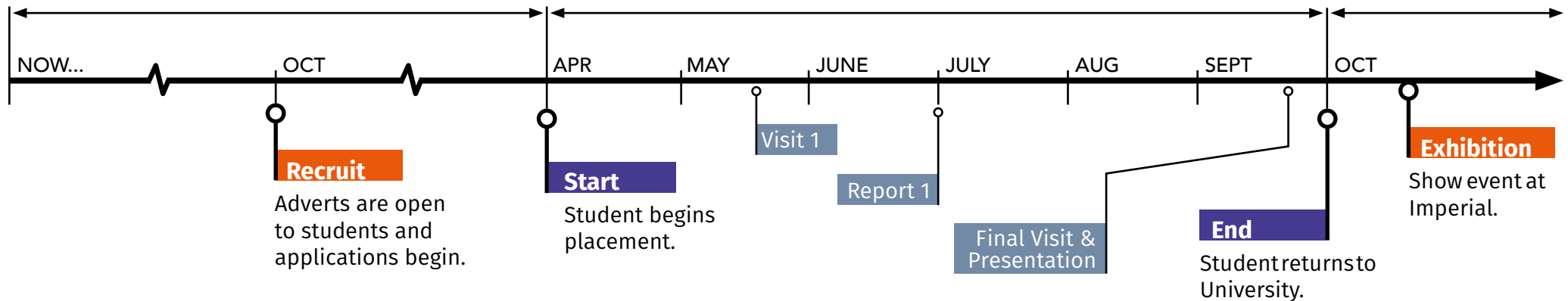
DIVERSE OPPORTUNITIES

Our students are highly capable and diverse, making them well suited for a range of different roles and sectors. We encourage them to have a breadth of interest and we're looking for an equally broad range of companies - from start ups through to global corporations - to take them on.

Placement Timeline

We aim to make the placements process as simple and beneficial as possible for everyone involved, and the application process starts the first week of the academic year in October.

In order to have access to a wider range of candidates, you are advised to advertise as early as possible, with many placement students across Imperial receiving offers before Christmas.



Advertise:

Contact us to discuss opportunities.
 Agree placement details.
 Complete job advert proforma.
 The job advert will be loaded onto our internal system for the students to view.

Recruit:

Receive student applications.
 Interview and assess the applicants.
 Make offers.
 This process will be managed by the company, and Imperial can offer help as required.

Placement:

Welcome the student into the business.
 The student should be given responsibility for one or two large scale projects.
 An academic tutor will visit twice to ensure the placement is going well.

Assessment:

The student will be required to submit reports at the middle and end of the placement.
 At the end, the student should have a development review with their line manager and present their work and contributions to a group of company representatives.

Celebrate:

Students from across the Design Engineering programme will exhibit their work at a special event held at Imperial College.

Key Information

Terms and Conditions

Placement students are paid for their work, although the College does not stipulate a rate of pay. Other statutory terms and conditions will also apply, including holiday leave allowance. These conditions will be part of the contract of employment agreed between the company and their employee (the student).

We will also require you to complete a placement provider form, and ensure the placement meets Imperial's [placement learning policy](#).

Project/Job Description

Since the industrial placement is a compulsory element of the MEng degree, we need to ensure that the type of work the students will be undertaking is relevant to their studies. Therefore, before we can advertise your placement opportunities, we require a project/job description to review.

The student is required to work on one or two projects rather than a large number of smaller tasks. We realise, however, that a detailed job description may not be available in advance of the Placement, so a brief description of the company/department and typical projects the student will be involved in may be sufficient.

The work should be at graduate entry level and must have a strong focus on the application of engineering/design thinking and embodiment to ensure it is educationally advantageous.

Recruitment and Selection

We want to ensure companies maintain complete control over the recruitment of their placement student, and therefore responsibility for managing applications, interviews and offers lies with the company.

If required however, we can support this with screening and arranging interviews here at Imperial to tailor your recruitment process.

Tutor Visits

In May and September the student's Tutor and/or the Industrial Liaison Officer will visit the company. During these visits they will hold informal meetings with the student's line manager and/or mentor to assess the student's achievements, plus the company's assessment of the student and the quality of the placement to create a progress report.

Company Assessment

Assessment of the student's contributions and achievements by a company supervisor during the placement is also desirable. Towards the end of the placement we ask hosts to conduct a performance review meeting with the student where they complete a short form on the student's performance. In addition, we ask that hosts facilitate a presentation where the student can tell a panel of company representatives about their contributions.

Academic Assessment

The students will be required to submit two reports during their placement - one at the end of June in the middle of the placement, and one during September at the end of the placement. These have no strict format or content, and instead we ask the student's to leverage existing company reporting procedures and documentation formats to describe the scope of their work. The reports will be reviewed by internal College examiners and will be treated as confidential to the company.

Exhibition

When the students return to start their final year of study at Imperial, we will hold an exhibition of the work they have conducted whilst on placement to celebrate their achievements. Placement companies will be invited to attend to see the scope of work produced and meet the students entering their third year who will be looking for placements in the year ahead.

For any questions, and to discuss options for recruiting a Design Engineering placement student, please don't hesitate to get in contact. Details are on the back page of this booklet.

More About Design Engineering

We believe that the scope of a Design Engineer's work can cover the nano-scale through to the system-view. As such, our students receive cutting edge research led teaching of the latest developments in technology and methods including additive manufacturing, human factors and mechatronics and robotics.

The programme structure is shown on the right hand side giving detail of the subjects covered across the degree. In the first two years the students gain a solid base through learning fundamental skills from across engineering and design. In the third and fourth years they are able to explore more advanced applications and specialist subjects, forming them into competent and creative designers - able to design advanced products, services, experiences and systems.

Example Student Project

People Pod (shown right) is a first year project in which the students are asked to design and build an interior for an autonomous transport pod, and to build a full scale mock-up of their design. This required human factors, experience design, woodworking, 3D modelling and the production of manufacturing drawings. The project was assessed by staff from the College as well as Technologists from the Transport Systems Catapult.

The Importance of Industrial Placements

The six month industrial placement is a compulsory part of the degree programme, as we believe it is one of the most important parts. It is a valuable opportunity for students to apply their skills and knowledge to real world challenges - and to understand the commercial context of their field of study.

To prepare them for this, the course has been designed with a substantial number of project and coursework modules of increasing scale throughout the programme. By the third year when they leave for placement, our students are at BEng equivalent level.



PROGRAMME STRUCTURE

Year 1:

- Introduction to Design Engineering
- Human Centred Design Engineering
- Engineering Mathematics
- Computing 1: Introduction to Scientific Computing
- Computing 2: Algorithm Design and Analysis
- Solid Mechanics 1
- Engineering Analysis 1.3 – Electronics
- Production and Materials

Year 2:

- Gizmo: Physical Computing
- Data Science
- Sustainable Design Engineering
- Finite Element Analysis
- Thermofluids
- Electronics 2: Signals, Systems, and Control
- Engineering Design Project

Year 3:

- Innovation and Entrepreneurship
- Group Project
- Robotics
- Optimisation
- Industry Placement (April–September): Work on-site with the industrial partner supervised jointly by the partner and Imperial
- Optional: Audio Experience Design
- Optional: Design Psychology
- Optional: Industrial Design
- Optional: Design for Additive Manufacturing

Year 4:

- Masters Project
- Enterprise Roll Out – launch one of your project outputs to market
- Optional: Nano Design
- Optional: Robotics Research Project
- Optional: Strategic Management
- Optional: Project Management
- Optional: Biomimetics
- Optional: Sensing and IoT

Frequently Asked Questions

What kind of companies host placement students?

A wide range of companies host Design Engineering students, this includes companies, both large and small, and in the UK and overseas - for example: Apple, ABB Robotics, Cambridge Consultants, Coutts, Dyson, Google, Huawei, Jaguar Landrover, Jason Bruges, Microsoft, Monokoto, New Voice Media, Ocado and Rolls Royce amongst many others. A high proportion of students are offered graduate jobs by their host company which indicates the success of the scheme.

What if you already know which student you want to recruit?

If you have already offered a placement to one of our students, then we offer a shortened process of approval. In these situations however, it is still important that companies complete a project/job description for the College to review, to ensure that the proposed work is educationally beneficial for the student.

What if you want to hire an overseas student?

This is not a problem. As the Industrial Placement is a compulsory part of the degree programme overseas students do not require a work permit to undertake an Industrial Placement.

How will your confidential information be treated?

We recognise that some projects may contain confidential information. As such, Non-Disclosure Agreements (NDAs) may be put in place between a company and the employee (the student), and the School of Design Engineering. Please note that NDAs cannot be signed by an individual academic assessor.

Although all submissions will be treated as confidential, we recommend students get their coursework approved by an internal manager from the company in charge of the project. This practice would enable the company to remove any commercially sensitive or inappropriate material.

This should not, however, prevent the student from discussing your organisation, the technologies they used or what they have learned from their work experience. Please remember that these presentations also promote your company to future applicants.

What are the next steps?

1. Get in [contact](#) to discuss your options and how your company might benefit from working with our Design Engineering students (contact details on the following page).
2. Attend one of our placement events occurring throughout the year, to meet our students and hear more about their work.
3. Review Imperial College's [Placement Learning Policy](#), and complete a Job Advert Proforma and Placement Provider Form.
4. Send these to Imperial for review to confirm suitability of the project/role.
5. Your placement advert will be added to our online system for the students to view - the system will be live from October to April each year.
6. The students will apply for the position through your own company processes as dictated.
7. Placements will run from April to September each year starting from 2021.

CONTACT US

If you would like to advertise placement opportunities or you'd like to find out more about how your organisation can benefit from hosting placement students, please contact:

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*Cover image: Brutalist Tapestry co-created
by Leah on Industrial Placement at Jason
Bruges Studio in 2018*

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