THE UNIVERSITY *of* EDINBURGH

School of Engineering


# Industrial Placements

# Industrial Placements

## Overview

Students studying Engineering at the University of Edinburgh have been undertaking placements for over 20 years. Students undertaking Mechanical, Chemical and Electronics & Electrical Engineering M.Eng degrees can carry out six months placements/industrial projects as part of their programme.

Civil Engineering students can undertake the Edinburgh Award for Civil & Environmental Engineering Industrial Placement during vacational placements. This award ensures that the student can obtain maximum value from the placement and share their experiences with the Civil Engineering community at the University.

The School has an Industry Engagement Manager who can provide support with advertising to our students and help arrange non-disclosure agreements if required.

We have a responsibility to our students which means that we are unable to advertise or promote unpaid placements or internships.

> “Max Fordham LLP recruit about 20 graduates each year in our offices in the UK. We have built good links with Universities near our offices to encourage students to work with us and to enable our engineers to contribute to the University.
>
> We recognise that providing a student placement gives students an opportunity to understand what it is like working in our industry and whether it is the type of career opportunity that interests them.
>
> We have been working with the University of Edinburgh for many years and are particularly impressed with the quality of the students and their education, many of whom have since joined our practice and are working in our offices.”

# Employer Benefits

### Access to individuals with higher-level skills who can bring new ideas to the company

The benefits to an employer from the high-level skills an undergraduate can provide are maximised in a high quality placement which is carefully conceived and the best candidate identified so that the student's knowledge or interests are relevant to the business.

### An additional resource

An inherent strength of a fixed-term placement is that it allows the employer to draw upon a temporary, and thus flexible, source of talent. Businesses often have discrete project requirements that lend themselves perfectly to a temporary appointment, particularly for an articulate individual with higher level skills.

### Add significant value to your business

Placement students that bring new ideas and an additional resource to a business will frequently in turn add significant value to the employing organisation.

### A route to support future recruitment

Taking on a placement student holds considerably fewer risks than recruiting a new full time employee and a high quality placement has the potential to identify key staff over the longer term that will eventually lead the business and help it grow. This is coupled with the benefit that little initial training is needed to convert a placement student into a fully-fledged member of a graduate programme, given their prior familiarity with the business.

### Supporting students to gain employability skills.

Placements form an important part of a business' ethos, corporate social responsibilities and identity by developing the skills of local students or those that are important to the future of their industry.

### Developing links with the School and its academic staff

This may bring benefits beyond the placement scheme such as research collaborations or participation in an Industrial Advisory Board.

# Chemical Engineering Industrial Project

## Overview

The industrial project in Chemical Engineering can be undertaken by MEng students in their final year. It consists of a piece of original work in chemical engineering or a related discipline within an industrial context. The scope of industrial projects varies widely - some are based on production facilities and involve investigation of plant operation, modelling and analysis of performance, others are laboratory based involving experimentation, others are purely theoretical, and some are a blend of all these elements.

Each industrial project has two elements:

1. A substantial project involving the student in independent analysis of a problem, and giving him or her a degree of responsibility for defining the scope and conduct of the project. The project is carried out at the site of the industrial sponsor over a period of approximately six months.
2. The presentation of the work in form of a poster and a written report.

The student will normally start in June and work with the industrial sponsor for six months returning to university for their final semester in January and is typically a company employee for the duration of the project. The report is handed in after the spring vacation (mid April) but it is not intended that the project work itself should continue after Christmas.

The project must be a self-contained piece of work carried out entirely by the student in the available six month period. The project needs to be academic in general conception i.e. with some theoretical as well as practical content. Many students end up working on more than one project, with either a common theme running through them or with one main project being identified on which to focus the report.

The scope of the project is agreed in advance between the University and the industrial sponsor, and there is one industrial and one academic supervisor, both of whom take part in the assessment of the student's work.

## Degree Programmes

- M.Eng Chemical Engineering (5years)
- M.Eng Chemical Engineering with Management (5 years)

## Timeline

Placement Advertising: September - June of 4th year
Placement Timing: June - December of 5th year. Minimum duration 23 weeks.

## Key Contacts

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# Electronics & Electrical Engineering Industrial Project

## Overview

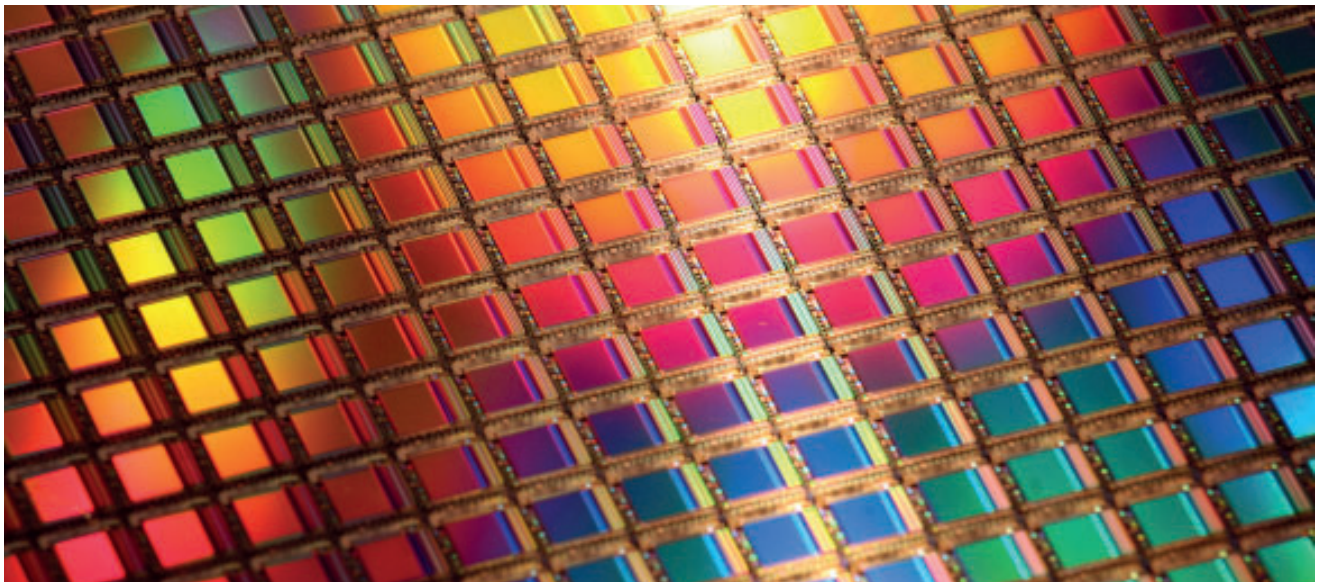
During the final year of their degree, M.Eng students may choose to undertake their final year project within a company. This allows the students to gain experience of current engineering practice and enables them to appreciate the relevance of their academic studies by allowing them to apply the knowledge and skills they have learnt at university to real-life engineering problems. The projects undertaken by students while on placement span a very broad range, both in terms of nature and content, and accordingly what the students gain from their work experience will vary from placement to placement. The project provides the student with an opportunity to plan, carry out, report and critically evaluate an engineering design or research programme, and should enable the student to demonstrate initiative and personal responsibility.

The project undertaken by the student while on placement is chosen by the company, subject to four basic requirements:

- it should be relevant to the degree subject;
- it should be at an appropriate level (suitable for a new graduate engineer);
- it should give the student some scope for using their own initiative and;
- it should preferably be based around a single theme so that a coherent final report can be written by the student.

The Industrial Project should develop skills such as time and resource management, team-work, communication, use of IT facilities and creative problem solving, although it is appreciated that the extent to which some of these topics are addressed will vary between placements.

The student will normally start in June and work with the industrial sponsor for six months returning to university for their final semester in January. The placement student will typically be a company employee for the duration of the project. Two assessed reports are submitted one in August and another in January on return to the University.



The industrial supervisor is required to read and mark the project reports using the marking sheet supplied by the University. The reports will also be independently assessed by the academic supervisor and a second member of the academic staff, the thesis examiner.

## Degree Programmes

- M.Eng Electronics & Electrical Engineering (5years)
- M.Eng Electronics & Computer Science (5 years)

## Timeline

Placement Advertising: September - December of 4th year
Placement Timing: June - December of 5th year. Minimum duration 23 weeks.

# Key Contacts

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# Mechanical Engineering Industrial Placement

## Overview

All students undertaking a Mechanical Engineering M.Eng degree must spend six months working in either a company or at an overseas academic institution during their fourth year. If the placement is in industry, it is important that the student is involved in the company activities, and not just an observer. They are expected to carry out work at graduate level, with all the attendant disciplines and responsibilities.

The broad aims of the industrial placement are to complement the academic base, with emphasis on:

- understanding engineering resources and their efficient utilisation;
- extending the engineering application experience;
- understanding the financial and commercial activities of an engineering business;
- the importance of satisfying the customer's requirements;
- developing the ability to undertake technical risk evaluation;
- a professional approach to engineering; and
- accepting professional and ethical responsibility for decisions.

The placement will usually begin in January and must last for a minimum of six months and the student is typically a company employee for the duration of the project. The student returns to the university in September to complete his or her studies. The placement is assessed through two reports, a poster and a presentation to the academic supervisor. In addition, the student is asked to keep in touch with their academic supervisor monthly.

The industrial supervisor is asked to assist in the assessment of the student's work during the placement. This normally takes the form of a discussion with the academic supervisor and completion of a feedback from at the time of the final report submission. Towards the end of the placement, the academic supervisor will visit the placement company (or arrange an extended

telephone/Skype call or videoconference). The student will give his or her presentation during this time and the industrial supervisor should participate in the discussion.

## Degree Programmes

- M.Eng Mechanical Engineering (5years)
- M.Eng Electrical & Mechanical Engineering (5 years)

## Timeline

Placement Advertising: September - December of 4th year
Placement Timing: January - August of 4th year. Minimum duration 23 weeks.

## Key Contacts

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# Civil Engineering
# Industrial Placement (Vacational)

## Overview

The industrial placement in Civil & Environmental Engineering will allow the student to get an excellent understanding of the professional aspects of the discipline and to acquire relevant work experience, putting their studies in context.  The student is responsible for making arrangements for the placement, but the university will provide guidance and relevant company contacts.

The placement will typically be undertaken during the summer before the final year. The recommended duration is 12 weeks. Students are also encouraged to undertake placements during the earlier years of their degree programme studies.

The essence of the placement is applied work in an industrial context linked to civil and environmental engineering or any topic related to these disciplines. The scope of the experience will vary widely, depending on opportunities that are available at the sponsoring company/organisation, from the design, construction and maintenance operations, modelling and analysis of performance, to experimentation and theoretical studies.

The placement will lead to the Edinburgh Award for Civil & Environmental Engineering Industrial Placement. This Award ensures that the student can obtain maximum value from the placement and share their experiences with the Civil Engineering community at the university. Academic guidance and feedback will be provided at the beginning, mid-point and end of the placement.

The main characteristics of the Edinburgh Award are:

- Recognition for relevant work experience related to industrial practice in relevant fields of civil and environmental engineering.
- Monitored development through the placement through established learning priorities and their impact on the host organisation.

The submissions for the Edinburgh Award consist of a number of self-contained pieces of work carried out entirely by the student. The achievement of the Award will appear in the relevant degree transcripts, but is not assessed for credits towards the degree.

A Civil & Environmental Engineering industrial placement feedback event is convened at the start of Semester 1 to discuss and share the specific outcomes for each participating student and the wider benefits to the Civil Engineering community, e.g. spanning potential research and teaching collaborations, enhanced employability etc. The outcomes will also be documented in student blogs to further the dissemination.

## Degree Programmes

- M.Eng/B.Eng Civil Engineering (5 years/4years)
- M.Eng/B.Eng Structural and Fire Safety Engineering (5 years/4years)
- M.Eng/B.Eng Structural Engineering with Architecture. (5 years/4years)

## Timeline

Placement Advertising: September - June
Placement Timing: June - August. All years but most commonly after 3rd and 4th year.

# Key Contacts

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