Capstone Student Industry Projects are an opportunity for you to oversee a group of students designing or researching a non-critical project which, when completed, can be used by your organisation.

Capstone Student Industry Projects are unpaid projects undertaken by a group of 2 to 4 final year Masters students in collaboration with an industry supervisor and an academic supervisor at the University. For most students the Capstone Project represents the culmination of five years of study before becoming professional Engineers.

Projects are one-year long and can start either in the first or second academic semester. Students can work on-site at your organisation, at the University with your regular input, or a combination of both. Every May and October, students showcase their projects at our biannual Endeavour Exhibition event.

Proposing a Project
To enquire about establishing a Capstone Project at your organisation please contact the most appropriate departmental contact(s) below, sending them a proposed project title, a 250-word summary of the project, the number of students and teams that you would like to host, and the industry mentor name and contact. Teams can vary from 2 to 4 students and each project can be undertaken by up to 2 groups.

If you already have an academic supervisor contact, please indicate this in the correspondence. Otherwise, one will be suggested for you.

Timing
The ideal time to propose and discuss a project with academics is around November-January and May-June, for projects starting in March (semester 1) and August (semester 2), respectively.

Departments and Capabilities
The School of Electrical, Mechanical and Infrastructure Engineering (EMI) encompasses three departments. Each Department offers different specialisations that equip students with skills to undertake a range of industry projects.

A. Department of Electrical and Electronic Engineering
   1. Communications and Networks
   2. Control and Signal Processing
   3. Electronics and Photonics
   4. Power and Energy

B. Department of Mechanical Engineering
   1. Aerospace Engineering
   2. Industrial Engineering
   3. Manufacturing Engineering
   4. Mechanical Engineering
   5. Mechatronics Engineering

C. Department of Infrastructure Engineering
   1. Civil Engineering
   2. Engineering Management
   3. Environmental Engineering and Water Systems
   4. Ocean Engineering
   5. Spatial Engineering and Land Systems
   6. Structural Engineering
   7. Sustainable Buildings and Renewable Energy Systems
   8. Transport Engineering and Smart Mobility

Project Allocation
Students apply for their preferred projects based on the project description. To increase the visibility and appeal of your project to our students, we recommend creating a 3-minute video to showcase your proposed project, the company, and potential skills and opportunities that the
Some examples of opportunities that generally attract students to take industry-based projects are:

- Opportunity to work closely with an experienced professional engineer.
- Opportunity to do internship during the semester break in the summer in January-February or winter June-July (based on their one semester Capstone performance).
- Opportunity to be hired full time at the end of their study, either on probation or permanent (based on their year-long Capstone performance).

Note that every student cohort is heterogeneous, and groups will have different skill levels. The project descriptions, offered opportunities, and the video are the opportunity for you to try to attract the most suitable students for your project. Clear requirements in the project description help students judge whether they have the necessary skills and experience to conduct the project. Talk to the academic supervisor if you would like to include requirements and pre-requisites for students to apply for your project.

Projects that require diverse technical knowledge may have an increased appeal to students while also leveraging the multi-disciplinarity of the joint EMI Capstone Student Project.

Supervision Expectations and Best Practices

The Capstone Student Industry Projects represent an opportunity for the industry mentor and the company to develop a collaborative relationship with both the students and the supervising academic.

While the mentor does not need to be involved in the daily supervision of the work or marking of assessment items, it is expected that they will engage with both the students and the academic supervisor on a regular basis throughout the project (bi-weekly, for example).

Setting clear expectations to the students early on is very important. However, it is also recommended that the mentor and academic supervisor gauge the strengths and limitations of the student team in the first few weeks of the project and adapt the project goals and expected outcomes accordingly.

Keeping students enthusiastic and engaged is the key to a successful outcome.

Department Contacts

**Electrical & Electronic Engineering**
Associate Professor Marcus Brazil
brazil@unimelb.edu.au
+61 3 8344 3829

**Infrastructure Engineering**
Dr Murray Peel (Semester 1)
mpeel@unimelb.edu.au
Dr Patricia Lavieri (Semester 2)
patricia.lavieri@unimelb.edu.au

**Mechanical Engineering**
Dr Bagus Nugroho
bagus.nugroho@unimelb.edu.au
+61 4 2604 0484

The University’s Public Liability and Professional Indemnity insurance covers the University and its students in relation to the placement. Capstone Project hosts will be asked to sign the University’s Vocational Placement Letter Agreement which contains the terms and conditions under which we establish these projects, including the IP terms.

Note that there are usually more project proposals than groups, so not all projects will be taken. If your project is not selected by the students, it can be offered again in the following semester.