



**AUT**

**ENGINEERING**  
INDUSTRIAL PROJECTS

# WELCOME TO THE INDUSTRIAL PROJECT

This handbook outlines the scope of the 'Industrial Project', a course requirement for final year students enrolled in the BE (Hons) degree at Auckland University of Technology (AUT). The project is a partnership between the student, AUT and Industry. Whereas the scope of the project is initially proposed by the Industrial Partner, it is executed by one or more students under the joint supervision of AUT academic staff and a representative from the industry organisation. It is undertaken over the duration of two semesters, typically from the beginning of March or July.

The program is intended to give students 'real life' industrial experience, preparing them for the transition into the workforce and providing them with relevant industrial education in manufacturing techniques, management systems, research applications, design and other activities. The process involves the student's use of existing skills as well as a significant amount of advanced independent learning. Meeting regularly with academic and industrial supervisors, the student works independently to achieve the required outcomes of the project. It represents the final examination of the BE student's ability to perform as an engineer.

The Industrial Partner is reasonably expected to benefit from the collaboration via the achievement of specific engineering goals that have relevance to the organisation's business. Depending on the nature of the project, the deliverables may include hardware or software prototypes, engineering designs and computer generated models, details of which are documented in a professional engineering report. Ultimately, the program is expected to deliver a pool of more rounded and 'work ready' graduates that can adapt quickly to meet industry expectations.

The Industrial Project is a substantial body of work, involving as significant commitment of time on behalf of the student. In general, no additional resources are required from the Industrial Partner, although a nominal charge may apply if multiple students are assigned to address large and complex tasks. Typically, higher levels of commitment from all parties will result in more useful outcomes.

We hope that your Industrial Project experience is a worthwhile and enjoyable one. If you have any problems or would like additional information, please contact Dr Andrew Hilton on 09 921 9717 or email [andrew.hilton@aut.ac.nz](mailto:andrew.hilton@aut.ac.nz).

## WHAT CONSTITUTES A SUITABLE INDUSTRIAL PROJECT?

A project should combine elements of research, design, construction/implementation, testing and evaluation of performance and must contain aspects that are original in design concept and not a direct copy from other preceding work.

The project may be:

1. Redevelopment/analysis of an existing device/product/system
2. Development/analysis of an ancillary element or additional feature in an existing device/product/system OR
3. A completely independent or defined element of a larger or ongoing project or development within the Industrial Supervisor's organisation.

Although students may seek assistance from outside sources, they must be able to clearly indicate significant aspects of the project which they have completed as an individual. AUT has sole responsibility for ensuring that the project meets all academic requirements and it will typically be at a level that would be suitable for a newly graduated appointee.

Whilst a successful outcome for the Industrial Partner is both sought and desirable, the primary goal of the paper is to facilitate and examine the student's ability to carry out a large industrial project. In particular, it aims to give the student the opportunity to perform, develop and demonstrate various academic skills, as well as other project management, communication and decision-making capabilities. Beyond this, AUT can make no guarantees with respect to the outcomes of the project, a factor that should be considered by the Industrial Partner when originally scoping the work.

# HOW THE INDUSTRIAL PROJECT WORKS

## Timelines

The project timelines are dictated by the academic calendar. Most projects start at the beginning of Semester 1 (beginning of March) and are completed at the end of Semester 2 (mid November). A small number of projects will run from the beginning of Semester 2 (end of July) until the end of Semester 1 of the following year.

The Industrial Partner may submit ideas for a project at any time during the year, but it is usually impossible to start work on a project outside of these timeframes. After submission, the University Project Coordinator may contact you to discuss the suitability and scope of the project in more detail.

## Project Proposal and Agreement

During the first week of the Semester, each student is assigned a project depending on their individual strengths, interests and skills. At this point, the Industrial Supervisor is encouraged to interview the nominated student to ensure there is an overall level of comfort with the selection.

On securing a project, the student will liaise with both Industrial and Academic Supervisors in order to prepare a Project Proposal. A Project Proposal will specify a program of events, a plan for allocation of resources, a budget for both purchases and outwork, and a schedule of meetings to be held with both supervisors.

The student must submit copies of the Project Proposal to the AUT Project Coordinator and the Industrial Partner within 3 weeks of the start of the Semester. Once the proposal is accepted, a Project Agreement is signed indicating agreement by all related parties to the scope of the work. A Confidentiality Exception Clause can be inserted into the Agreement if necessary.

## Responsibilities

The Industrial Project is a partnership between the Student, AUT and Industry. All parties have clear roles and responsibilities, as summarised below.

### Student

- The Student undertakes to complete the activities as agreed in the project proposal.
- The Student agrees to conduct himself/herself in a professional manner at all times during the placement with the Industrial Partner.

### Industrial Supervisor

- The Industrial Supervisor agrees to assist the Student with all resources needed to carry out the work, as agreed to in the project proposal.
- The Industrial Supervisor agrees to give feedback on the work performance of the Student and to complete the student assessment forms on project completion.

### AUT University

- AUT will provide the Student with an Academic Supervisor to support the student's academic work
- AUT is solely responsible for the assessment of the student, and the granting of academic credit.

## Project Outputs

The schedule of deliverables required from the Student includes the submission of a comprehensive engineering report, two oral presentations and preparation of a Project Poster.

Oral presentations are of 10 minutes duration, with an audience consisting of fellow students, Academic and Industrial supervisors and other AUT staff. The poster is designed to describe the project as a whole and communicate the most important engineering issues within the project.

Posters are displayed and judged at the Project Exhibition and Awards Function that is typically held at the end of October. The Project Exhibition is an opportunity for students to show off their work to staff, family and potential employers, and we hope you will be able to attend this event.