

College of Engineering

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Engineering Work Experience – A Guideline for Employers

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1. Introduction

Engineering students complete an intermediate year, followed by three professional years of study in one of nine engineering degree disciplines: chemical and process, civil, computer, electrical and electronic, forestry, mechanical, mechatronics, natural resources and software. Engineering students are required to complete a total of 800 hours (100 days) of Engineering Work Experience. There is a general expectation that students will be remunerated.

2. Requirements for Engineering Work Experience

The 800 hours (100 days) of Work Experience are expected to cover practical and professional aspects of the engineering profession. This is normally completed in two periods, each period being approximately 400 hours (50 days), but can be completed in three periods (two periods of at least 40 days and one of 20 days). At least one work period of at least 320 hours (40 days) is to be spent in tasks related to professional practice. This may involve design, analysis, investigation, or other tasks with an element of cognitively complex problem solving as appropriate for the discipline.

If both periods of work are with the same employer, the work should be substantially different in terms of responsibility or problem-solving, i.e. in two different departments or two different types of work experience (i.e. workshop and professional). If there is a possible conflict of interest (e.g. working with a family member), students must provide full disclosure and get pre-approval from their departmental Engineering Work Experience Supervisor.

3. Industry Employers

We appreciate the involvement of industry in helping the next generation of engineers gain experience of the work environment. Characteristics of successful work experience include the following.

Provide diversity of work experiences. Do give the student a variety of tasks. This may be difficult in a very small organisation. It is emphasised that the work should not necessarily be designed to make the student into a tradesperson.

Expose the student to organisational processes. Do provide the opportunity for the student to gain an insight into the management and operation of the organisation. This could include:

- observation of staff relationships,
- the need for tea breaks and regular hours,
- the amount of work achievable by one person in a day,
- the different skill levels of a sample of the workforce,
- the organisation structure and skills of the organisation,
- how they achieve sales and delivery,
- how much product development and research they do,

- stores and/or inventory control, workshop layouts,
- production management planning, safety systems, quality control, etc.

Duty for Health and Safety. The student becomes an employee of the industry organisation for the duration of the work experience. Consequently, the employer is responsible for the health and safety of the student while at the place of work. This extends to provision of induction, machine/process specific training, personal protective equipment, and a safe work environment as for any other employee. This applies regardless of the jurisdiction in which the work is undertaken. The employer is considered to be the person conducting the business of enterprise (PCBU) in terms of the New Zealand Health & Safety at Work Act (2015). Students are required to describe and reflect upon health and safety practices at their place of employment in their formal work experience reports. This is a critical aspect of the training of professional engineers.

4. Processes

1. **Student initial preparation.** While at university, students complete a Workshop Training Course relevant to their type of engineering, and a First Aid course. Generally, this will be completed prior to industry work experience, but scheduling constraints make this uncertain, and students vary in their practical ability, so industry organisations should ascertain the actual level of skills of students before putting them onto tasks that require workshop skills. Students complete a health and safety test at the university before commencing work experience. The test is to ensure students have basic awareness of worker and PCBU responsibilities under the Act – it does not cover task-specific safety.
2. **Student finds work.** Students contact prospective employers directly. Employers can expect a CV and an indication of period available for work (start and finish dates).
3. **Employer establishes the employment contract.** The employment decision is made solely by the industrial organisation. Likewise, the employment contract. The University is neither a partner in the employment contract nor an employment broker.
4. **Student identifies employer.** The student provides the employer’s contact details to the College preferably before commencement of employment or at least within two weeks thereof.
5. **College confirms Hours Completed.** The College contacts the employer near the end of the work period to confirm the details of the work undertaken. Once confirmation of the details (dates of employment, hours worked, type of work performed, and comments on student behaviour, attendance and performance) is received the hours are credited towards the student’s degree requirements. Work will not be credited until confirmation is received from the employer. Unsatisfactory confirmatory reports may be discussed with the employer and the student, and may result in the work not being credited for the Degree.
6. **Student writes report.** Students must submit a report on their work. The report is confidential between the student and College of Engineering and will normally be assessed by only one academic member of staff. The report is not disclosed to other parties. Reports are returned to the student after they have been assessed, but students must sign a declaration to the effect that they will not disclose the contents. It is also helpful that the employer appreciates students will be expected to take notes of their observations and take some pictures (with employer permission) to enable them to prepare a professional and illustrated work report.

Contact details

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