



ENGINEERS  
AUSTRALIA

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# Providing Work Experience to Engineering Students

*Guidelines to get you started.*

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# Building the next generation of engineers

An important foundation in the development of our engineers is the engagement with authentic, real-world engineering practice during their tertiary studies.

Operating companies, government departments, local governments, engineering consultants, contractors, fabricators, research businesses, public authorities, and other organisations play a critical role in developing the future engineering workforce by providing opportunities for this exposure.

A shortage of quality placements affects the flow of graduate engineers and creates a disincentive for potential engineering students, negatively impacting their engineering development.

Engineers Australia is working with universities and industry to enhance the opportunities for Western Australia's undergraduate and graduate engineering students to obtain relevant experience.

Increased engagement from stakeholders is required to ensure the next generation of engineers gain this practical engineering experience and take their place in building the future we wish to see.

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## Why do we need you involved?

**Exposure to industry experience plays a critical role in developing engineering students' skills and education.**

Engagement with industry is critical to student engineers. It provides them with experiences that help shape their discipline choices and course selection, as well as contextualize their studies in real world applications.

With improved exposure to industry and opportunities to experience first-hand professional practice in the workplace during their tertiary studies, our future workforce becomes more:

- Industry aware – having experienced different aspects of professional engineering environment/s;
- Productive and independent contributors; and
- Dynamic and innovative thinkers.

Through engagement with real-life practice and hands-on learning, student engineers will be better placed to creatively approach challenges and actively contribute to the diversity of the workplace.

There are many ways for industry partners to engage with student engineers, including:

- A twelve-week work placement over a single period, split periods, part-time during the academic term or other combinations; or
- A partial placement, less than twelve weeks; or
- Other professional experience opportunities such as:
  - » Individual or group projects that include exposure and experience in a professional workplace;
  - » Technical industry presentations;
  - » Building universities partnerships to develop and inform innovative, real-world learning experiences;
  - » Providing students with a scholarship that is linked to a practicum placement; and
  - » Participating in university and industry engagement projects.

## Benefits for organisations who engage with students – it's a win-win situation!

Working with universities to help shape future engineers, provides many benefits for organisations including:

- Build partnerships and connections with universities. Student engineers are often connected to the sector's latest research and teachings and can bring with them a diversity of thinking and creative problem-solving;
- Students are often outgoing, motivated and eager to learn;
- Students assist in building the leadership and management skills of the supervising staff in your business. Both formal and informal learning in this regard count as continuing professional development for professional engineering staff; and
- Contributing to engineering education design, content and focus, thereby addressing skill gaps in engineering graduates and maintaining a productive and cost-effective workforce.

Other benefits include:

- Potential for engaged students to act as unofficial ambassadors for organisations within their university and broader student networks;
- Increase equity and diversity of teams (age, gender, cultural background, etc.);
- Generate a pipeline of potential future graduate engineers;
- Foster innovative ideas and inspiration for professional engineering staff;
- Gather feedback on employment conditions that can be incorporated into graduate recruitment programs;
- Build partnerships and connections with universities.



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# University Partnerships

Partnerships between universities and industry are integral to ensuring learning experiences reflect contemporary industry environments, provide students opportunities to explore career aspirations, and facilitate the transition from student to graduate engineer.

Partnerships extend beyond industry partners 'hosting' students to a more collaborative and cooperative relationship. Industry and university engagement is characterised by respect, agility, communication, responsiveness, common goals and shared benefits. Inclusive partnerships result in a harmonious blend of academic and workplace proficiencies and a more fulsome educative experience. Industry and university collaboration enables:

- Relevance and meaning in curriculum and assessment design;
- Diverse working integrated learning (WIL) experiences to be embedded across a degree;
- Improved student engagement and motivation;
- Authentic feedback for students to inform the development of professional skills;
- Currency of content and focus;
- Capacity building of all stakeholders;
- Enriched creativity, innovation and research;
- Extended networks;
- Shared resources and expertise; and
- Strengthened social, cultural and human capital.

**The Australian National WIL (Work Integrated Learning) Strategy released in March 2015 (see <http://acen.edu.au/wp-content/uploads/2015/11/National-WIL-Strategy-in-university-education-032015.pdf?x83050>) is premised on collaboration between educational institutions and industry partners. The Strategy promotes WIL as a key strategy for improving graduate employability and ensuring the economic sustainability of Australia.**

Partnerships between industry and universities are central to realising a skilled Australian population, enhanced global employability and sustained productivity for industry.

Building partnerships with universities and engaging with students provides many benefits. Some ideas for engaging with students include:

- On-campus presence - this may be an invitation to collaborate in interactive workshops with students, associate with student clubs;
- Attend career expos, orientation week events etc to increase your brand visibility on campus;
- Invite students to workplaces for 'a day in the life of an engineer';
- Promote your organisation through endorsements from graduate engineers and work-integrated learning (WIL) ambassadors;
- Collaborative engagement with engineering students supports the development of engineering education programs to address contemporary industry needs;
- Provide networking opportunities for students, university staff and professional engineering staff;
- Design collaborative research projects that address industry needs and develop students' research expertise.

## EXAMPLES OF UNIVERSITY AND INDUSTRY PARTNERSHIP MODELS

**IPrep** works across five Western Australian Universities to engage PhD researchers with industry through projects that fit within a 7-week scope. Industry partners may be from business, government or community ranging from start-ups and SMEs, through to large corporations and government departments. For more information, visit [iprep.edu.au](http://iprep.edu.au)

**The CEED (Co-operative Education for Enterprise Development)** program offers research projects for students sponsored by business, government and not-for-profit enterprises. The projects link industry with prospective graduates and the cutting-edge research programs of Western Australia's leading Universities. CEED scholars spend 8 weeks on site with the client (securing their professional practicum), then continue to work on the project for academic credit on campus. There is also an option to engage students full-time for 3 to 5 month placements to gain access to specialist expertise. For more information, visit [ceed.wa.edu.au](http://ceed.wa.edu.au)

## Next steps

Think you have a project or role for student engineer(s) in your business? Connect with the relevant university coordinators who can assist with promoting work experience opportunities to students and ensure that the university governance processes are adhered to. Certain universities will even collect the applications and assist with the selection process (if required).

If you have a direct relationship with the student work with them to get in touch with their university contact to complete paperwork for them to receive credit for their work placement.

When undertaking a paid placement, a student is defined as an employee of the host organisation. In that case all employee entitlements should apply.

The Universities generally provide Personal Accident and Public Liability Insurance and where relevant Travel Insurance for the student while they are undertaking their approved unpaid professional placements. For a letter confirming insurance coverage, or a copy of the Certificate of Currency, contact the relevant University contact.

The University might also request organisations hosting students on unpaid placements to have current Public Liability Insurance for a defined limit in place.

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# University Contacts

## Curtin University

Student Experience  
Coordinator  
[saeWIL@curtin.edu.au](mailto:saeWIL@curtin.edu.au)

## Edith Cowan University

Engineering Practicum  
Coordinator  
[se-practicum@ecu.edu.au](mailto:se-practicum@ecu.edu.au)

## Murdoch University

Discipline of Engineering and  
Energy, College of Science, Health,  
Engineering and Education  
[WorkIntLearn@murdoch.edu.au](mailto:WorkIntLearn@murdoch.edu.au)

## University of Western Australia

UWA External Engagement Advisor,  
[wil-partnerships@uwa.edu.au](mailto:wil-partnerships@uwa.edu.au)

Placement Coordinator,  
Work Integrated Learning (WIL) Placement Program  
[wil-ems@uwa.edu.au](mailto:wil-ems@uwa.edu.au)

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# Best Practice

**Employing a small group of students can often mean less supervision is required because they act as a self-managed team. The benefits are: less supervision required and; superior collective problem-solving skills.**

- Let students know in advance, what they will be doing, what their role will be and what outcomes you expect;
- Students are increasingly interested in the values of organisations they will be learning in, who they will be working with and how they will fit in?
- Give the student inductions; if relevant, ensure students have a 'White Card';
- Give the student opportunities to work with chartered engineers, graduates, and other professionals in your business;
- Give the student some responsibility with guidance; tailor the experience to the students' capabilities;
- Ensure your team understands that the student is there to learn, so that team members invite the student to join site visits, fieldwork, and networking events, and observe practices such as design of review meetings, tender selection, etc;
- Give students feedback on their performance during the placement. Ask for feedback from the student(s) during and at the end of the placement – what could your organisation have done better?

Things to avoid:

- Giving the student too much responsibility without sufficient guidance and/or supervision;
- Giving the student no interaction with engineers; and
- Giving the student only non-engineering work (e.g. only administrative tasks like filing or answering phones). While students can be given these tasks it is important they experience the breadth of tasks engineers must perform in the workplace.

Even employers with the best of intentions may inadvertently exploit students, resulting in a negative experience for both the student and the employer.

Common examples of exploitation include expecting students (paid or unpaid) to work long or inappropriate hours, setting unrealistic deadlines for their experience level, and not clearly communicating deadlines and project timeframes.



# Further tips to enrich the experience for the students and your organisation

## Before

- Universities can hold pre-briefing sessions for students prior to their work experience. Pre-briefings should cover topics such as preparing for work experience; professional conduct; organizational culture; and learning in the workplace. Discuss this option with your university contact prior to student work placement start dates;
- Host organisations are required to provide inductions for students to familiarize them with policies and procedures that students should be aware of whilst in the workplace, with a focus on health and safety; and
- It helps if supervisors draft an initial project scope to give the student an idea of what they will be working on. It encourages the supervisor to structure the time of the internship and by providing clear direction in the initial days/ weeks to the student, helps the student to settle in quickly.

## During

- Develop a student engineer guideline that includes useful questions or side projects for the student to work on during downtime. (e.g. reading the company's annual report, strategic plan, or communication strategy for the project they are working on);
- Appoint a Supervisor / Senior Engineer who will meet with the student at least on a fortnightly basis. If there is more than one student they should share their experiences; provide feedback on the students' performance and ask for feedback on the organisation. It's a great opportunity to check if the student is getting the most out of the placement;
- Train a graduate or a student engineer who is experienced in your organisation to be a mentor for new student engineers. Use this as professional development for the existing employee to provide them with the experience in mentoring new hires;
- Consider having your mentor work with a student to build practices that support a standardized set of core competencies for chartered engineers – e.g. Engineer Australia's online self-assessment tool for becoming a chartered engineer. This online tool provides steps to work towards achieving proficiency in the 16 core competencies for engineers to work towards across their careers. Using such a tool provides opportunity for self-reflection and development of mentors/staff as well as the student;
- If the host company has a graduate program, current graduates can be great buddies for students, which is a great experience for both sides and frees up time of the supervisor. Students benefit hugely from working with a wide range of staff across the organisation; and if the company can host more than one student and defines a joint project, students will support each other and often be able to work very independently; and
- Remember to sign off on the work the student has done on the placement – having fortnightly catch-ups is a great time to do this. Universities may have Certificates of Work Performed (or similar) which can be used.

## After

- Keep in touch and see how you may be able to assist them. They may take up employment with your organisation in the future or ask you for a reference. To help you, they may refer someone from their network to apply for a position you are advertising.

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# FAQs from Employers

## Q: Do you have to offer a paid position?

**A:** It is not required to offer pay for an internship if the main benefit of the arrangement is afforded to the student and the internship formally counts towards their qualification. This is often referred to as a 'vocational' placement.

Employment after the period that counts towards a student's qualification typically constitutes a "paid internship". The Fair Work ombudsman definitions for paid and unpaid internships can be found at [www.fairwork.gov.au/pay/unpaid-work/work-experience-and-internships](http://www.fairwork.gov.au/pay/unpaid-work/work-experience-and-internships).

If you do offer a paid position you will be required to provide a minimum wage and employment standards that meet the National Employment Standards and the applicable award for your position. More information can be found at the Fair Work Ombudsman website; [www.fairwork.gov.au](http://www.fairwork.gov.au).

## Q: We are only a small company; it costs us a lot to offer training, even if unpaid. How can we benefit from hosting a student engineer?

**A:** Whilst there can be costs to business for providing training and also opportunity costs as organisations' staff take time out of their day to onboard student/s, provide coaching and oversee their work, many organisations have experienced a range of benefits.

These include fresh insights coming from the students as they ask questions/seek to understand how your business works (and could improve), generation of new ideas and overall bringing a greater diversity of thought to problem solving. Having students in the workplace can also bring opportunities for staff to enhance their management and leadership skills through delegation, coaching and informal or formal mentoring.

The experience will enable students to learn about your organisation and potential job roles that they or their fellow students may not otherwise glean from recruitment campaigns. If they have a positive experience, they will share that with their fellow students which can assist you in recruiting the right people for your company.

## Q: What level of supervision do we need to provide? Does the student need to be supervised by an engineer the entire time?

**A:** Students should be supervised by, or have direct access to, a university qualified engineer during their work experience. It is not a requirement that they are only supervised by an engineer (e.g. your student may report directly to a team leader that is not an engineer but works closely with a team which includes one or more engineers).

## Q: What do we do if problems arise during the student work placement? Will the university support us?

**A:** University partnership coordinators provide support for students and host organisations. This includes working through and resolving any problems that arise during the student work placement.

## Q: How do we know what type of work the student is able to complete? Does it have to be 100% engineering related?

**A:** Traditionally work experience is gained within an organisation that employs professional engineers who provide supervision to students doing similar work to that done by a graduate engineer.

However, providing a broad mix of activities and work is encouraged as it provides students with a greater insight into the breadth of skills and work required in engineering. This can include office and site work, consulting and project work, customer relations and administrative tasks.