

# Enhancing Graduate Employability Through WIL

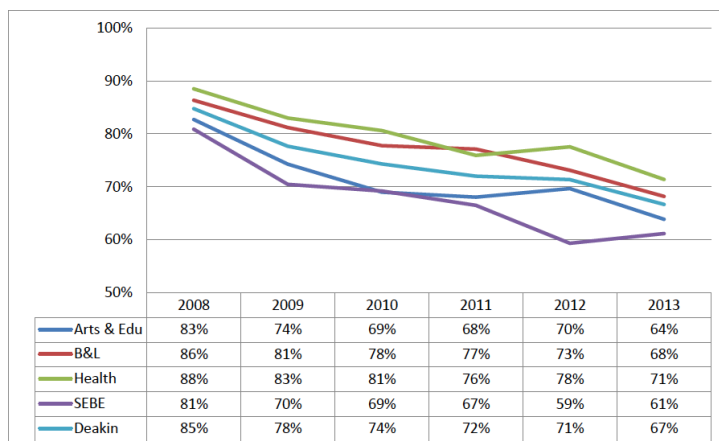
## PURPOSE

This paper presents a case for a more formalised approach for Work Integrated Learning (WIL) within the Faculty of Science, Engineering and Built Environment (SEBE). The framework defines the need for a scaffolded approach to WIL within courses to address student employability skills and to allow students to evidence course learning outcomes.



## GRADUATE EMPLOYABILITY

SEBE, along with all other faculties, has had a steady decline in graduate employability since 2008 as shown in Figure 1 below. The Faculty has the lowest employability rate of all faculties.



In 2012 and 2013, around 1 in 6 (18%, 15%) SEBE graduates wanted more WIL related activities in their course.

Source: 2012/2013 AGS

Figure 1: Time series of graduate employability by faculty

It is clear from graduate comments that students across all SEBE disciplines are looking for more WIL experiences. These experiences range from more career education, laboratory experiences and fieldwork through to increased intensive and compulsory placements. There is a sense from this commentary that our curriculum lacks authenticity and links to the world of work, and is too academic. However there are pockets of excellent practice in many places in the Faculty that could be improved through better alignment and integration.

## EMPLOYABILITY AND GRADUATE ATTRIBUTES

Employability skills are not the same as graduate attributes although the two are related and often used interchangeably. Employability skills are the skills and attitudes that enable employees to get along with their colleagues, to make critical decisions, solve problems, develop respect and ultimately become strong ambassadors for the organisation. As defined by Robinson (2000) they are “those skills necessary for getting, keeping and doing well in a job”.

The core skills for work are refined further in the Core Skills for Work (CSfW) Developmental Framework (DIIRSTE & DEEWR, 2013) which is useful for understanding employability in these three broad areas:

**Employability is about those skills necessary for getting, keeping and doing well in a job.**

Robinson (2000)

- **navigating the world of work** including managing career and work life, and understanding work rights, roles and protocols.
- **interacting with others** including communicating for work, connecting and working with others, and recognising and utilising diverse perspectives.
- **getting the work done** including planning and organising, making decisions, identifying and solving problems, creating and innovating, and working in a digital world.

Graduate attributes are often referred to as 'soft skills' and provide the foundation career building blocks for students. The development of a student's graduate attributes is often centred on skills related to "getting the work done". Although some student activities focus on "interacting with others" this is often delivered in the context of learning rather than work. The great benefit of WIL is that it provides students, if designed correctly, with learning outcomes that build and develop the full range of employability skills.

## DEFINING WIL

The LIVE strategic agenda and Learning 2014 have both highlighted the need to drive our curriculum so that students exit with a range of skills that make them employable as identified in the strategic plan: *Educating students for the (globally-connected) jobs of the future*. To deliver on this offer we must recognise that we first need to build courses that meet the employment needs of the future, not just in Australia but globally. We must then deliver approaches that improve and enhance the employability of our graduates.

Work Integrated Learning (WIL) encompasses a range of learning approaches and strategies that integrate theory with the practice of work (Patrick et al, 2009). WIL experiences are well recognised as providing students with experiences that make them more work-ready. In addition, WIL provides students with experiences that link the classroom with the workplace and is particularly relevant for students who have no opportunity to gain relevant work on their own. WIL research (Patrick, et al., 2009) suggests that this is especially important during a program rather than at the end of a course.

WIL therefore, is more than work experience and includes placements, projects, fieldwork, simulations, virtual or in-class authentic experiences, and reflections on employment. The important characteristic that separates WIL from other learning activities is that the WIL student experience is authentic and mirrors the real world.

WIL "must feature authentic activities, with complexities that match those in real practice" (Smith, 2012, p. 250). A WIL curriculum therefore includes authentic skills, tasks, ill-defined problems, context-specific thought processes and complex scenarios best undertaken in 'real' environments. The learning artefacts should resemble outputs that the graduate is likely to undertake in the workplace.

For SEBE, WIL is an activity that offers cloud and located learning opportunities for an authentic application of the discipline. A whole-of-course approach to WIL scaffolds student learning in two intersecting domains (Cooper, Orrell and Bowden, 2009): learning to work and working to learn through the application of the principles of teaching, practice and assessing discipline in action.

### WIL Domains

Learning to Work  
and  
Working to Learn

Cooper, Orrell & Bowden, 2009

WIL integrated into the curriculum gives students the opportunity to undertake discipline specific work related experiences for credit as part of their degree. SEBE recognises that graduate recruiters place a premium on students who have participated in WIL programs. These organisations recognise that participating students are more work ready and better prepared to make informed decisions about career choice.

### Work Experience is not the same as a WIL Experience

Work experience provides students with valuable work-related and discipline practice. However, work experience learning tends to be informal and it is often a challenge to align and evaluate student performance against the CLOs in this activity.

With WIL placements integrated into the curriculum, students are engaged in pre and post work readiness learning modules that align employability measures with CLOs using reflective practice pedagogies. Students are required, through WIL, to integrate coursework theory and practice with their experiences of the workplace. Students submit multi-layered artefacts in a portfolio to demonstrate learning.

## THE GRADUATE DEVELOPMENT PROGRAM

In 2008 the Faculty introduced a Graduate Development Program (GDP) to ensure that all undergraduate students, and many postgraduate students, in SEBE have the opportunity to learn through a WIL experience. The program is most evident in the development of SEBE Internship and Industry Based Learning units, but also in Professional Practice units that sit within the disciplines (See Appendix A for a complete list of existing units).

The Graduate Development Program (GDP) encouraged all undergraduate courses to improve student employability skills through the inclusion of core units of study that prepared students for work. The School of Architecture and Built Environment and the School of Engineering already embedded professional skills in the design units and engineering practice respectively. The School of Life and Environmental Science and the School of Information Technology both introduced professional practice units to support the GDP. In addition, the Faculty introduced two types of Work Integrated Units as electives. The Internship unit provided students with an unpaid short-term placement opportunity for credit and the Industry-Based Learning unit provided students with paid opportunities for significantly longer placements, also for credit.

As the employability data shows, proportionally fewer students gain employment than they did five years ago despite the introduction of a Graduate Development Program (GDP). There are a number of possible explanations: the job market may be more difficult to navigate for students; our courses may not be matched well with the range of available jobs; by being optional for many students, the GDP may not target the students who need the program most; or the outcomes of GDP units are not integrated into the learning occurring in other units. While these all contribute to the employment rates of our students, our current programs most likely lack the scaffolding required for students to first develop employability skills, and then to apply and refine these skills across the course.

## ENHANCED COURSES THROUGH A SCAFFOLDED WIL PROGRAM

The Faculty prepares its graduates for employment by equipping them with cutting-edge knowledge, skills, and abilities to serve as effective members of their professions and communities. SEBE students must have the opportunity to develop both discipline-specific and employability skills from Year 1 of their course as located and cloud learning experiences. Subsequent years must allow students to develop and apply situated learning through workplace and/or community experiences and placements; in simulated workplace environments; and through projects and problem-solving activities with industry, the community and/or the professions. Students must have multiple and scaffolded opportunities to develop, reflect upon, and evidence employability skills against their course learning outcomes.

Develop, apply and refine employability skills across a course.

## PRINCIPLES OF A WIL APPROACH TO EMPLOYABILITY SKILLS

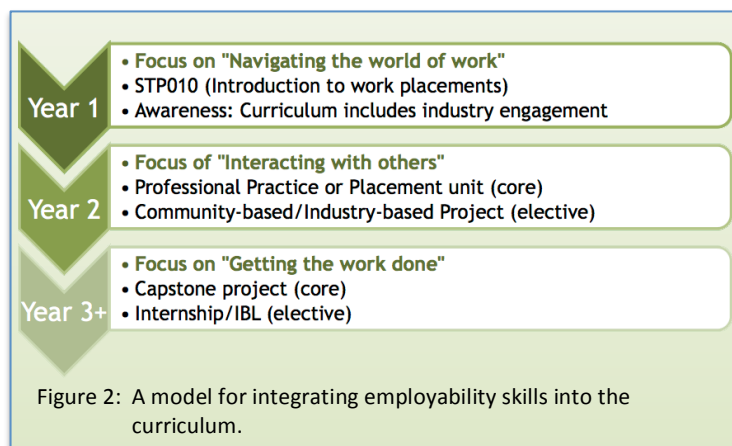
Building a new approach to developing employability skills requires a shared and agreed set of principles that guide how curriculum is developed and how courses are enhanced. The following principles demonstrate how employability skills can be developed through WIL activities.

1. Require all students to complete a variety of multiple WIL activities across their course that scaffold the learning of employability skills and evidence their outcomes.
2. Scaffold core curriculum relating to discipline specific knowledge to ensure that students can demonstrate the application of that cutting-edge knowledge and associated skills to employers.
3. Develop authentic assessments that link Deakin Graduate Learning Outcomes (DGLOs) with a discipline specific context and drive learning associated with the three broad areas of employability.
4. Engage industry more deeply in cloud and campus learning activities as guest presenters, assessors and evaluators, panel members, and clients for student project work.
5. Incorporate industry-based standards around current technical skills and practical processes to contextualise the theory.
6. Provide placement and/or simulated placement opportunities to students that integrate the learning and application of the theory and practice of work, preferably in the discipline area.
7. Prepare all students undertaking WIL placement activities for the learning experience and ensure that students are debriefed and reflect on the placement.

## A MODEL FOR BUILDING EMPLOYABILITY SKILLS THROUGH WIL

To introduce and scaffold student outcomes, particularly in 'navigating the world of work' and 'interacting with others', our curriculum needs to include activities that bring industry people, experiences and projects into the classroom or other learning locations. Emphasising this approach, particularly in first year, will allow students to contextualise their learning and begin to understand the protocols used in the workplace.

Scaffolding employability skills across the curriculum requires the integration of work-related experiences, reflection and career and job readiness into core components of courses. Figure 2 presents one model for this integration in undergraduate programs.



At first year students are introduced to employability skills through awareness raising. Currently the zero credit point unit "Introduction to Work Placements" has more than 570 student enrolments across SEBE and other faculties. It has been extremely successful in communicating 'learning to work' and 'working to learn' to students. Our first year curriculum must also seek to engage industry in talking to students about skills, attitudes and standards in the work place to allow students to begin to navigate the world of work.

At second year, students need to complete professional practice and/or a placement as a core unit of study. While developing the three categories of employability skills – navigating the world of work, interacting with others, and getting the work done – the unit has a focus on interacting with others within the context of the discipline. It is here that we need to ensure that students begin to learn how to reflect on their learning. To achieve this it is critical for professionals to work with the academics so that students are aware of their capabilities as future employees. A key component is the opportunity for students to evidence their development through project work and/or international study or work experiences. Our curriculum needs to be flexible enough so that students can develop the experience that best meets their needs.

In the final year(s) students should be given the opportunity to enhance and build on their earlier learning at second year through capstone experiences, Internships or Industry-Based Learning opportunities. In these units students would be required to develop a significantly deeper understanding of their employability skills and practice with the focus being on evidencing their readiness in 'getting the work done'. Holdsworth, Watty and Davies (2009) provide a number of opportunities that embrace the broader scope of WIL including:

- Problem-Based Learning (PBL)
- Project-Based Learning (PjBL)
- Case Study Analysis
- Field or Work Placements
- Internships
- Simulations or Virtual Situated Learning Environments (VSLE)
- Travel study tours and Immersion experiences
- Service learning
- Volunteering.

However, the success of final year opportunities to develop employability skills is dependent on our ability to scaffold the development of the core skills required.

## CONCLUSIONS

The Core Skills For Work Developmental Framework (CSFW) recognises the importance of building employability skills in students. WIL experiences aim to support the much-needed development of the generic skills, the career and job readiness capabilities, as well as the integration of discipline specific knowledge and techniques within the curricula. To enhance employability outcomes, a culture of WIL must be instilled from first year as mandatory, but as beneficial and even transformative.

Adopting a WIL approach to enhancing employability will also impact on how we communicate with industry. We need to engage with employers to shift the focus from work experience to learning and evidencing the skills required for work, particularly in the discipline of the course. We need to collaborate with employers to construct, deliver and assess learning experiences that require students to reflect on their experiences in learning to work and working to learn. Finally, we need to work with employers to ensure that our learning experiences are authentic, integrative and situated within the work that will be required of our graduates.

## RECOMMENDATIONS

1. This framework be adopted by SEBE and inform the development of current and future course curriculum.
2. The scaffolded model for developing employability skills using WIL be adopted as the basis for delivering employability skills for SEBE students. SEBE disciplines may adapt this model to their own needs and circumstances.
3. Faculty Internship and Industry Based Learning units are enhanced to deliver elective options to all undergraduate students of SEBE. To build these units successfully, the Faculty administration will work with DSA and the Planning Unit to remove the restriction on units being tied to Schools on Callista and locked into Field of Education codes.
4. Course teams will decide on the appropriate approach for their discipline to integrate industry engagement into the classroom and other learning experiences of students, particularly at Year 1 of the course.

Malcolm Campbell, Associate Dean (Teaching and Learning)  
Karen Young, Lecturer in Work Integrated Learning  
Stuart Palmer, Associate Professor in Integrated Learning  
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## REFERENCES

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Robinson, J.P. (2000). *What are Employability Skills?* Community Workforce Development Specialist, Alabama Cooperative Extension System. Vol 1, Issue 3.

Smith, C. (2012). *Evaluating the quality of work-integrated learning curricula: a comprehensive framework*. *Higher Education Research & Development*, 31:2, 247-262.

## RESOURCES

A toolkit, developed by Griffith University, which focuses on how students can benefit from learning and working in a professional context outside the university, while studying.

[http://www.griffith.edu.au/\\_data/assets/pdf\\_file/0009/290817/Professional-skills.pdf](http://www.griffith.edu.au/_data/assets/pdf_file/0009/290817/Professional-skills.pdf)

The Guide to Capstone Experiences, developed by the University of Melbourne, provides an overview of the key features and considerations in developing capstone experiences, and it offers practical advice and examples on incorporating capstone experiences in curriculum design.

[http://www.cshe.unimelb.edu.au/resources\\_teach/curriculum\\_design/docs/Capstone\\_Guide\\_09.pdf](http://www.cshe.unimelb.edu.au/resources_teach/curriculum_design/docs/Capstone_Guide_09.pdf)

The Core Skills for Work Developmental Framework (CSfW), developed by the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education and the Department of Education, Employment and Workplace Relations describes the core non-technical skills that have been identified by Australian employers as important for successful participation in work.

<http://www.industry.gov.au/skills/CoreSkillsForWorkFramework/Documents/CSWF-Framework.pdf>

## APPENDIX A: CURRENT SEBE WIL OFFERINGS

SEJ441	<p>Engineering Project A This unit forms the first part of the Engineering capstone project.</p> <p><i>This unit enables students to conduct and construct an engineering research project from first principles. It provides direction into production of an engineering research project specification as well as an extended literature review. Moreover, it uses the concept of research methodologies as a vehicle for student self-directed learning and prepares them for tackling an extended project from conception through construction and evaluation ultimately to realisation.</i></p>
SEJ446	<p>Engineering Project B This unit forms the second part of the Engineering capstone project. It is a 2cp unit.</p> <p><i>This unit consists of the final part of an individual project of suitable standard and length to enable students to develop skills in experimental research and/or the application and synthesis of engineering design principles to a project schedule.</i></p>
SEP490	<p>Engineering Work Experience Students must complete a total of 12 weeks of placements to graduate. This unit is a 0cp unit.</p> <p><i>Before students will be deemed eligible to graduate from the Bachelor of Engineering or Bachelor of Technology they must obtain an aggregate of at least 12 weeks (BE) or 8 weeks (BTech) of suitable practical experience during their program. This experience may be in an engineering workplace or laboratory, where the student will be exposed to professional engineers and engineering associates carrying out the duties. The experience need not be gained at a single organisation or in a single block of time. Students will be expected to record their experiences in a logbook and to provide a written report detailing their impressions and learning outcomes gained during their work experience. The acceptability or otherwise of the employment experience, and the period of that type of experience that may be credited will be determined by the unit chair in consultation with the representative of the relevant academic management group. This unit will enable students to: learn about real situations in engineering practice via personal experience of an engineering workplace, develop a direct understanding of how organisations operate, increase awareness of the nature of the engineering profession.</i></p>
SIT302	<p>Project This unit forms the Information Technology capstone project. Students work in teams to complete the project.</p> <p><i>This is a capstone unit that will draw on the area of the student's study. Normally the project will be completed in a team with members drawn from any campus. This unit will allow students to demonstrate the synthesis of knowledge, methodologies and professional skills acquired during their study of IT with a focus on their stream or major (computer science and software development, games design and development, IT security, interactive media). Skills will include communication and teamwork skills, analysis and design skills, implementation techniques, system testing and quality control, writing skills and project management skills. The substantive/concrete outcome of the project will vary according to the stream of study and, thus, could be a software artefact in the case of a computer science and software development project, a model in the case of a security project, or a multimedia package in the case of an interactive media project for example.</i></p>
SLE225	<p>Global Environmental Placement <i>Environmental Science is an increasingly global discipline, and as such it is desirable for students to engage in their discipline in a more globally relevant fashion. This unit, Global Environmental Placement, requires students to locate a course-related international organisation in which they secure and satisfactory complete a placement. The international environmental placement is a situated learning activity that provides students with the opportunity to apply and develop their learning about globalization, international cultural issues and the role of cultural diversity in how environmental solutions are approached. The integration of the placement with academic learning will allow students to help solve authentic environmental problems or address real issues faced by organisations operating in the international environmental sphere. Placements</i></p>



	<i>are for a minimum two-weeks or for a negotiated period to a minimum of 80 working hours.</i>
SLE301	<p>Professional Practice</p> <p><i>The effective application of environmental science techniques requires appropriate and effective environmental programs to be in place throughout the community. These programs must address diverse issues at all levels, including education, and require personnel with skills beyond technical expertise. In this unit the development of generic, employment-related professional skills will be achieved through a combination of preparatory workshop sessions and lectures, and a minimum two-week placement or for a negotiated period over the trimester to a minimum of 80 hours within a relevant, course-related organisation. Approval must be granted by the Unit Chair prior to the commencement of the placement. The professional development workshop sessions will include identifying and developing personal and employment-related skills, such as job and resume preparation and interview techniques. Other employment-related issues covered include equal opportunity, awareness of cultural differences, occupational health and safety, risk management and performance evaluation. During the placement students will be encouraged to undertake a project to consolidate or enhance existing professional skills.</i></p>
SLE352	<p>Community Science Project</p> <p><i>Community Science Project is the final unit of the professional practice sequence for the Bachelor of Science. Students will complete all aspects of a project of their choice (pending approval by the Unit Chair), including development of the project description, needs analysis, completion of the project and presentation of results at a forum. The project will be developed and carried out in liaison with an external organisation, thus provide students with a potential career network and career opportunities. Student projects will be used as case studies to examine ethical issues, risk assessments, people and time management, cost analyses, knowledge gap analyses, and development of oral and written communication skills. The unit will also examine resume preparation and interview skills as a prelude to the project.</i></p>
SLE390	<p>Professional Practice in Bioscience</p> <p><i>In this unit the development of generic, employment-related professional skills in the fields of biological and biomedical science will be achieved through a combination of preparatory workshop sessions together with a minimum two-week placement or for a negotiated period to a minimum of 80 hours within a relevant, course-related organisation, arranged in consultation with the unit chair. During the placement students will be encouraged to consolidate or enhance existing professional skills. The series of professional development workshops will include: identifying and developing personal and employment-related skills, such as job and resume preparation and interview techniques; developing research skills; and developing written and oral communication and presentation skills. In addition, issues of occupational health and safety will be covered from both the employer and employee's perspective.</i></p>
STP3x1	<p>Industry Based Learning - IT, Eng, Science, Architecture</p> <p><i>This unit enables students to complete a full-time, 12 week (60 working days) IT-related Industry placement. Students will be required to undertake course-relevant work so as to gain experience as an IT professional and to apply discipline-specific professional skills and knowledge.</i></p>
STP351	<p>Internship - Information Technology</p> <p><i>This unit enables students to complete a placement of 100 hours (either as 3 week full-time or 12 week part-time unpaid basis) in an IT-related position. Students will be required to undertake course-relevant work so as to gain experience as an IT professional and to apply discipline-specific professional skills and knowledge.</i></p>