



UNIVERSITY
OF WOLLONGONG
AUSTRALIA

Career Ready – Evidence for industry, the university and myself

Target Audience

This document is for students from Year 1 through to their Final Year doing an Engineering Degree

Purpose

In Goals 1.2 and 2.2 of the University's Strategic Plan 2016 – 2020 the university commits to “**enabling our graduates to be career-ready, contributing to a world that is *ever changing* and to work in complex teams that cross disciplinary boundaries**” and to “**modernising our academic course offer to ensure it is attractive, efficient and that every student has *real-world, inquiry-led, technology-enriched, intellectually challenging and globally connected learning opportunities***”.

Introduction

Changes to society and the workforce have transformed the notion of learning from something you did once, to a life-long process. In order to stay relevant, individuals must learn from their experiences and look for opportunities to enhance and refresh skills. In order for students to obtain an accredited engineering degree they must show competencies determined by Australian quality standards together with accreditation standards. While the mapping of these competencies is undertaken by the university, students tend to focus so heavily on grades that they lose the holistic appreciation of the learning experiences.

Depending on employment cycles it can be very challenging for students to obtain work experience and/or a job. Obtaining work experience, as required by accredited engineering degrees is not only important for accreditation but for significantly enhancing initial employment prospects. For example, 70.94% of candidates who were successful in obtaining a graduate job had relevant degree-related work experience and 30.64% had completed their work experience with the same organisation that hired them on completion of their studies (source: GradConnection, 2016). However, getting that first work experience opportunity can be very difficult. Computerised recruitment systems and sheer competition from students applying from multiple universities create lots of competition. The question that students need to ask themselves is ‘what makes them any different from any other student at any university with similar grades?’ A similar question can be asked for those already in the workforce looking for promotion or change in direction, ‘what makes them any different from other employees with similar credentials?’ The development of relevant personal skills, understanding and perceptions through life experiences can be a major differentiator.

Are you prepared to take the initiative and proactively pursue the development of these skills and collect the evidence to demonstrate that you have them and can apply them?

Understanding and appreciating Key Performance Indicators (KPIs) can play a large role in a student's future success. Reflection of learning and building a portfolio of evidence is an important skill to learn, not only as a student but also as an employee looking to climb the corporate ladder. The Australian Government, under the banner of Quality Indicators for Learning and Teaching (QILT) undertake regular surveys of employers seeking to measure how well Australian graduates are prepared for the workforce. The skills measured by this survey form a range of KPIs that students should seek evidence for, as they form the basis of almost all work experience or job applications or interview questions (in various alternative phrases).

In order to prepare students for life-long learning and evidence gathering, an e-portfolio will be established to document both university and external learning experiences. A successful e-portfolio will be one that shows reflection on learning; appreciates the generation of skills and knowledge beneficial for the workforce and not centred on maximising grades; and, identifies weaknesses transforming them into strengths. The collection of evidence will be submitted with the work experience report in subjects ECTE399 or ENGG454 providing evidence to yourself, industry and the university that you are career ready.

What do I need to do?

It is critical for you that from the first year of your study, you must start collecting evidence, via an e-portfolio, from activities you perform at the university and externally against the Generic Skill listed in Table I. There is no right or wrong list of evidence that you must use to show obtainment of being career ready. Every student will have a different collection of evidence that concentrates on their own strengths and passions. The e-portfolio acts as a database of evidence that you can draw upon in the future.

This document is intended to help you by providing a range of suggested forms of evidence that you can pick and choose from, together with your own inspiration. The suggested evidence is concentrated on external forms (outside the realm of coursework) providing you with the opportunity to take initiatives that will help you stand out from the crowd. Some coursework examples are provided at the first year level, but beyond this the expectation is for you to reflect on your learning experiences. At the very minimum an e-portfolio should show a level of career readiness from coursework and work experience evidence. The earlier you start collecting evidence, the easier the activity and the greater the benefit. The more evidence you collect the easier it will be for you to undertake work experience / job applications or interviews, and give you a much greater chance of success.

Table I: The Generic Skills List

Generic Skill	Attributes
Adaptive Skills	1. Broad background knowledge
	2. Ability to identify new opportunities
	3. Ability to adapt knowledge to different contexts
	4. Ability to apply skills in different contexts
	5. Capacity to work independently
Foundation Skills	6. Oral communication skills (technical and non-technical audiences)
	7. Written communication skills (technical and non-technical audiences)
	8. Numeracy skills
	9. Ability to develop relevant knowledge
	10. Ability to develop relevant skills
	11. Ability to solve problems (including demonstrated ability to show engineering methods)
	12. Ability to integrate knowledge
	13. Ability to think independently about problems
	14. Ability to apply Work, Health & Safety knowledge
Teamwork Skills	15. Working well in teams
	16. Getting on well with others in the workplace
	17. Working collaboratively with colleagues to complete tasks
	18. Develop networks
	19. Understanding different points of view (stakeholder & user perspectives)
	20. Ability to interact with co-workers from different or multi-cultural backgrounds
Technical Skills	21. Applying professional knowledge to job tasks
	22. Using technology effectively
	23. Applying technical skills in the workplace
	24. Maintaining professional standards
	25. Applying ethical standards
	26. Capacity to integrate social, cultural, environmental and sustainability considerations
	27. Using research skills to gather evidence



Employability Skills	28. Ability to work under pressure
	29. Capacity to be flexible in the workplace
	30. Ability to meet deadlines
	31. Understanding the nature of the business or organisation (especially governance, client and stakeholder management)
	32. Demonstrating leadership skills
	33. Demonstrating management skills
	34. Taking responsibility for personal and professional development (including demonstrating awareness of career related employment opportunities, transition skills and knowledge of recruitment process)
	35. Demonstrating initiative in the workplace
	36. Finance and economic management
	37. Information management (work in a digital world)

The e-portfolio is structured according to the five generic skills outlined in Table I:

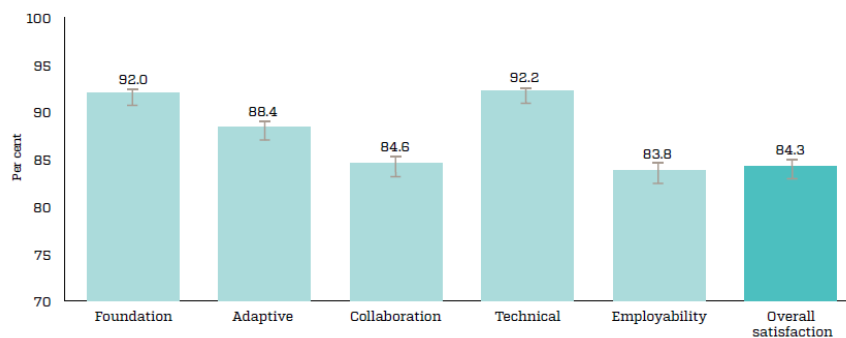
- adaptive skills;
- foundation skills;
- team work skills;
- technical skills;
- employability skills; and,
- other evidence (used for discipline specific evidence).

Within each generic skill is a list of attributes. You are not expected to provide evidence for each separate attribute, but can provide evidence that shows the collective attainment. The same evidence can also be used across multiple attributes across generic skills if it is relevant.

The attributes are mapped to Engineering Australia Stage 1 Competencies and AusIMM attributes with an in-depth understanding of what these attributes mean for an engineer can see in Appendix A.

Figure 1 summarises employer satisfaction across the five generic skills across all Australian universities in 2016 (QILT 2016 Employer Satisfaction Survey). When gathering evidence you should give careful consideration to building a comprehensive list targeting collaboration (teamwork) and employability skills, as strong evidence can lead to a competitive advantage against other applicants.

Figure 1 Employer satisfaction with graduate attributes and overall satisfaction, 2016 (%)



How can I use the e-portfolio to help me with job applications?

As with all things in life, challenges are less daunting when the appropriate amount of preparation has been applied.

If you were presented with an opportunity to apply for your dream job today how well would you be able to remember all the relevant evidence across the last five years that would demonstrate you are a perfect fit for the job? Would you have that evidence at hand, or would you need to do an extensive search or realise that evidence is lost?

What would you do if the application has selection criteria that you do not have evidence for?

It is common knowledge that it is very likely you would not be able to remember, or find most evidence and you would not be able to come up with new evidence in a day. Therefore, careful planning and recoding the evidence at that time can increase your chances of success, whether as a student looking for that first job, or an employee looking for a promotion or new career opportunity elsewhere.

Let's take an example of the selection criteria from a real job advertisement:

- Your written and verbal communication skills are excellent
- You enjoy liaising with internal teams and external clients
- You can overcome challenges to ensure successful completion of projects

Consider the following sample of possible evidence from the e-portfolio:

Attribute	Year 1	Year 2	Year 3
6. Oral communication skills	<i>Coursework:</i> Received 69% for my video project in ENGG104 on Power Systems	<i>External:</i> Joined Toastmasters and undertake monthly debates	<i>Coursework:</i> Received 100% on my presentation on marketing in ECTE350
7. Written communication skills	<i>Coursework:</i> Received 70% on my ENGG102 report on designs safe structures	<i>Coursework:</i> Received 85% on my essay in regards to ethics in engineering	<i>Coursework:</i> Received 100% for my laboratory report on Control Systems <i>External:</i> Won 3 rd place in IEEE Student Paper competition
15. Working well in teams	<i>Coursework:</i> Worked in a team in ENGG100 and our team got a credit [explain for doing what?]	<i>External:</i> At my part-time job at Company X, my shift was awarded the record for producing the most pizzas in an hour [explaining how this was achieved?]	<i>Coursework:</i> Our ECTE350 team won 1 st place at the Innovation Fair [explain for doing what?] <i>External:</i> For work experience at Company X, I worked in a team of 4 [explain for doing what?]
18. Develop networks	<i>Coursework:</i> Attended the guest lecture [about what?] series in ENGG103 and met someone that has broaden my insights within the industry [explain in what aspects?]	<i>External:</i> I attended CeBIT and connected with 3 CEOs. Attended UOW career fair. Joined IEEE Student branch	<i>External:</i> I attended the UOW "Networking After 5" event and met 3 engineers that I regularly communicate with on LinkedIn

We could use this information to answer the selection criteria in the following way:

For me communication is a key strength that I feel comfortable doing. In my first year of university I received some good grades for a number of my presentations and reports. However I knew I could do better, so I joined the Toastmasters; got myself a part-time job at my local pizzeria and I started attending the universities career fair and networking after 5 events, CeBIT and joined my local IEEE Student branch. In my quest to self-improve my marks and confidence substantially increased, and now as standard I receive top presentation marks and have used this to win 3rd place in an IEEE Student Paper competition and help my team win this year's top prize at the engineering innovation fair. These skills helped me immensely when I undertook my work experience at X, working in a team of 4 to do Y.

Evidence

This section outlines a range of possible sources of evidence that you can use to build your e-portfolio, which is a range of thought statements to think about the possibilities. The actual make-up of evidence will be determined by your accomplishments and exposure to extracurricular activities with every portfolio unique to your interests and strengths. The list of suggested evidence is targeted towards UOW and other extracurricular activities, to provide you with some support to realise the opportunities available.

A number of suggestions are [provided at the first year level](#) to provide some inspiration to start immediately.

Other coursework evidence should be determined by your reflection of learning activities and your accomplishments within each subject. In particular, it is good to show how your skills have developed and improved across the four year degree.



Evidence will be entered into the e-portfolio in two ways. Firstly, by text that outlines the evidence as shown in the previous table. Secondly, you will upload evidence that provides support of the text.

Some examples of evidence that you can show across the four years at UOW include:

- Reflection from field trips or technical articles read – *what did you notice and learn?*
- Reflection/blog from what you took out of guest lecturers or research presentations – *how did this change or add to your perceptions and understanding?*
- Laboratory/technical reports
- Design documentation
- Assignment submissions
- Posters
- Gantt chart from a project
- Videos or photos showing outcomes from project work
- Videos or photos showing you undertaking field work
- Video recording of you undertaking a live presentation
- Certificates received
- Complimentary emails or letters received
- Links to websites or other online sources such as publications

And there are many external opportunities to get involved in activities/organisations/clubs completely separate from the UOW that will give you the opportunities to develop your skills, understanding and perceptions (with the evidence) to increase the likelihood of employers selecting you, and smooth your transition into employment following your university studies.

The **key** to the evidence is **do not tell me, show me!**

Remember, employers are looking for people whose knowledge, skills and personal attributes are a good fit with their needs and team culture. This e-portfolio tool will give you the best possible evidence when you are applying for specific positions with employers



ADAPTIVE SKILLS

The following attributes showcase your ability to adapt and apply skills/knowledge and work independently.

According to the 2016 QILT data employee satisfaction across universities stands at 92% suggesting that some emphasis is needed to show how you stand out from other students.

The adaptive attributes are:

1. Broad background knowledge
2. Ability to identify new opportunities
3. Ability to adapt knowledge to different contexts
4. Ability to apply skills in different contexts
5. Capacity to work independently

UOW First Year Coursework Evidence

- **All subjects – results:** The best evidence is to show high performance across a great range of subjects. A 'pass' in theory represents that you understand about half of the subject content while a 'high distinction' identifies you have a more complete and broad understanding of the material. You may want to upload an assessment or your final grades for the session, great if you want to show a long term trend. Within first year this is especially important as you are undertaking subjects across a range of disciplines such as electrical, computer, mechanical, materials and civil; showcasing broad knowledge that can be applied across different contexts. Even within subjects, for example ENGG103, you learn how knowledge of materials is needed for each engineering discipline.

UOW Extra Curricular Evidence (show what you learnt or how you changed your perceptions and understanding)

- **UOW Solar Decathlon:** Within the solar decathlon you work on a diverse range of projects and examples can be drawn out that provide evidence for all five attributes. Upload pictures, videos, designs etc. of your contribution.
- **UOW SAE Race Team:** Within SAE you work on a diverse range of projects and examples can be drawn out that provide evidence for all five attributes. Upload pictures, videos, designs etc. of your contribution.
- **UOW Society Membership:** By joining a society you have an opportunity to initiative or participate in activities by attending guest lectures or undertaking field trips that harness your knowledge.
Note that simply being a member is not enough; evidence should focus on your participation in events.
- **Professional and industry societies** (e.g. IEEE Student Branch): Membership provides you with access to a diverse range of international resources and networking opportunities. Participation in research presentations; field trips; local, national and international congresses and competitions are some of the ways you can demonstrate evidence.
Note that simply being a member is not enough.
- **Careers Central - Career Accelerate:** Use this program to gain access to some of Australia's leading industry experts in graduate recruitment.
The evidence comes in showing how you use this opportunity to identify new opportunities, and apply knowledge and skills in different contexts.
- **Careers Central - Where Are The Jobs? The Hidden Job Market:** Use this program to find and create job and internship opportunities.
The evidence comes in showing how you use this opportunity to identify new opportunities
- **Careers Central - Career Smart:** Use this program to identify skills that you have and the skills employers want. As evidence show how you have used this exercise to identify gaps in your skills to identify new opportunities and broaden your knowledge. This would most probably link across many generic skills.
- **Careers Central – Univariate:** Use this program to obtain consultancy experience gaining real industry experience. Use the projects to provide examples of how you meet the five attributes.
- **Careers Central - Jobs on Campus:** Not all work experience needs to be engineering experience. Undertaking work in a variety of fields develops evidence across all five attributes. In particular, look to express evidence of how you used your engineering knowledge and skills and adapt it to other environments – this can be a significant differentiating factor for you.
- **Work Experience:** Your compulsory work experience will provide you with many forms of evidence across the five attributes.

External Evidence

- **Corporate Exhibition:** Attending exhibitions such as CeBIT can show that you are trying to immerse yourself with the latest and greatest trends within the industry and broaden your knowledge - *show what you learnt from this.*
- **Volunteer Work:** Not all work experience needs to be engineering experience. Undertaking work in a variety of fields develops evidence across all five attributes. In particular, look to express evidence of how you used your engineering knowledge and skills and adapt it to other environments – this can be a significant differentiating factor for you.



- **Certificates:** Think about obtaining some industry based certificates such as CCNA, Construction White Card, Use hand and power tools certificate, Certificate IV in Leadership and Management, Duke of Edinburgh Award, Statutory Licences and Heavy Vehicle licence
- **Part-time work in any field** will provide experiences that develop your skills, understanding and perceptions that can be documented to provide evidence across all five attributes
- **Find a mentor** – a very beneficial action is to find a mentor, ideally from the industry (but not a family member), to guide you, challenge you and help you proactively get the experience that will provide the evidence across all five attributes
- **Review how you spend your time outside UOW** – there are considerable everyday activities that you undertake that will give you the basis to provide evidence across all five attributes. This could include:
surf clubs; sporting clubs (e.g. football, netball, tennis, rugby, swimming, hockey, baseball etc.); any organised team activity; planning, organising and delivering any event (e.g. weddings, celebrations, community events) in any role; learning a second language; overseas travel or residency; music; craft; arts; coaching; technical official/referee; dancing; theatre; and belonging and contributing to organisations (e.g. Beyond Blue, Community Cancer Link, Lifeline, Rotaract, ethnic and indigenous associations; and university exchange programs.
- **What else do you know about or can you think of? Get out there and find out.**



FOUNDATION SKILLS

The following attributes showcase your general literacy, numeracy and communication skills and the ability to investigate and integrate knowledge. According to the 2016 QILT data employee satisfaction across universities stands at 88.4% suggesting that some emphasis is needed to show how you stand out from other students. The foundation attributes are:

6. Oral communication skills (technical and non-technical audiences)
7. Written communication skills (technical and non-technical audiences)
8. Numeracy skills
9. Ability to develop relevant knowledge
10. Ability to develop relevant skills
11. Ability to solve problems (including demonstrated ability to show engineering methods)
12. Ability to integrate knowledge
13. Ability to think independently about problems
14. Ability to apply Work, Health & Safety knowledge

UOW First Year Coursework Evidence

- **ENGG100:** Excellent grades in this subject present an opportunity to provide evidence of your ability to take a problem and break it down into a logical process, including sub processes. The group project report provides a good example of your written communication skills and knowledge based attributes. The workshop assignments provide an opportunity to show your ability to solve problems and integrate knowledge.
- **ENGG104:** The video project is an outstanding opportunity to provide evidence of your ability to communicate complex problems in simple ways, in addition to showing your ability to be creative. The technical report provides evidence of your ability to communicate technical information.
- **ENGG105:** The oral presentations provide evidence of your ability to publicly relay information to an audience.
- **MATH141/142/187/188:** The test and assignment results provide evidence of your numeracy skills

UOW Extra Curricular Evidence

- **UOW Solar Decathlon:** Within the solar decathlon you work on a diverse range of projects and examples can be drawn out that provide evidence for all nine attributes. Upload pictures, videos, designs etc. of your contribution.
- **UOW SAE Race Team:** Within SAE you work on a diverse range of projects and examples can be drawn out that provide evidence for all nine attributes. Upload pictures, videos, designs etc. of your contribution.
- **UOW Society Membership:** By joining a society you have an opportunity to engage with all members and participate in outreach opportunities. You also need to write reports and keep minutes of meetings.
Note that simply being a member is not enough; evidence should focus on your participation.
- **Professional and industry societies:** Membership provides you with opportunities to communicate with students, researchers and industry professionals on a local, national and international level. Participate in student paper and design competitions to for a chance to show where you stand against other students. Participate in outreach events and work on budgets, minutes, planning documents and bylaws.
- **Careers Central – Univariate:** Use this program to obtain consultancy experience gaining real industry experience. Use the projects to provide examples of how you meet the nine attributes.
- **Careers Central - Jobs on Campus:** Not all work experience needs to be engineering experience. Undertaking work in a variety of fields develops evidence across all nine attributes. In particular, look to express evidence of how you used your engineering knowledge and skills to communicate and solve problems in other environments.
- **Careers Central: Learn the secrets of successful interviewing:** Use this program as a form of evidence to show your professional development by improving your communication skills, including the ability to sell yourself.
- **Careers Central: UOW STEM Careers Expo:** The exhibition provides an opportunity for you to practice communicating with industry professionals. In many cases you will find the stands are filled with alumni making this a perfect introduction.
- **Careers Central: Networking after 5:** This is an opportunity to practise communicating with real business people in a familiar environment.
- **Work Experience:** Your compulsory work experience will provide you with many forms of evidence across the nine attributes.

External Evidence

- **Corporate Exhibition:** Attending exhibitions such as CeBIT can show that you are trying to immerse yourself with industry professional, in particular focussing on key jargon and protocols in speaking.
- **Volunteer Work:** Show evidence of your ability to apply all nine attributes in a non-engineering environment.



- **Men's Sheds:** Men's sheds is an organisation tailored to bringing likeminded technical people together. This can show evidence on growing your communications skills and developing your network.
- **Part-time work in any field:** This will provide experiences that develop your skills, understanding and perceptions that can be documented to provide evidence across all nine attributes
- **Find a mentor:** A very beneficial action is to find a mentor, ideally from the industry (but not a family member), to guide you, challenge you and help you proactively get the experience that will provide the evidence across all nine attributes
- **Review how you spend your time outside UOW:** There are considerable everyday activities that you undertake that will give you the basis to provide evidence across all nine attributes. This could include:
surf clubs; sporting clubs (e.g. football, netball, tennis, rugby, swimming, hockey, baseball etc.); any organised team activity; planning, organising and delivering any event (e.g. weddings, celebrations, community events) in any role; learning a second language; overseas travel or residency; music; craft; arts; coaching; technical official/referee; dancing; theatre; and belonging and contributing to organisations (e.g. Beyond Blue, Community Cancer Link, Lifeline, Rotaract, ethnic and indigenous associations; university exchange programs; app development; digital photography; writing a blog; and participating in a chess club.
- **Risk Assessment:** Some external examples where you would gain experience include joining a surf club; St Johns Ambulance; teaching and training of others
- **Social Media:** Considering that most recruiters will now look at your social media profile, provide evidence on how you maintain a professional image
- **What else do you know about or can you think of? Get out there and find out.**



TEAMWORK SKILLS

The following attributes showcase your ability to work in a team and adapt in different environments.

According to the 2016 QILT data employee satisfaction across universities stands at 84.6% one of the lowest rated skills in the survey. This suggests that many students do not place enough emphasis on developing these skills. Lots of evidence supporting the six attributes can help you distinguish yourself from the rest.

The teamwork attributes are:

15. Working well in teams
16. Getting on well with others in the workplace
17. Working collaboratively with colleagues to complete tasks
18. Develop networks
19. Understanding different points of view (stakeholder & user perspectives)
20. Ability to interact with co-workers from different or multi-cultural backgrounds

UOW First Year Coursework Evidence

- **ENGG100:** The group project provides a good example of how you perform in a team
- **ENGG102:** The project work provides a good example of how you perform in a team
- **ENGG105:** This subject provides many sources of teamwork evidence, especially in understanding different points of view and working in a diverse team. Working with an external client you also develop your network.

UOW Extra Curricular Evidence

- **UOW Solar Decathlon:** The solar decathlon is based on working in an effective team environment. As a result there are many forms of evidence across all attributes. Upload pictures, videos, designs etc. of your contribution.
- **UOW SAE Race Team:** The race team is based on working in an effective team environment. As a result there are many forms of evidence across all attributes. Upload pictures, videos, designs etc. of your contribution.
- **UOW Society Membership:** Societies are diverse groups, especially when joining a society without an engineering focus. This provides you with exposure to a diverse group of people and helps develop your network.
Note that simply being a member is not enough; evidence should focus on your participation in events.
- **Professional and industry societies** (e.g. IEEE Student Branch): Membership provides you with exposure to a diverse group of people and helps develop your network.
Note that simply being a member is not enough.
- **Careers Central - Career Accelerate:** Use this program to gain access to some of Australia's leading industry experts in graduate recruitment. The evidence needs to show how you use this opportunity to build your network and interact with a diverse range of people.
- **Careers Central - Career Smart:** Use this program to identify the different points of view especially between the user and stakeholder.
- **Careers Central – Univariate:** Use this program to obtain consultancy experience gaining real industry experience. Use the projects to provide examples of how you meet all attributes.
- **Careers Central - Jobs on Campus:** Not all work experience needs to be engineering experience. Undertaking work outside of engineering shows your ability to work in diverse teams
- **Work Experience:** Your compulsory work experience will provide you with many forms of team based evidence across the six attributes.

External Evidence

- **Volunteer Work:** Show evidence of your ability to apply all six attributes in a non-engineering environment.
- **Men's Sheds:** Men's sheds is an organisation tailored to bringing likeminded technical people together. This can show evidence in developing your network.
- **Part-time work in any field** will provide experiences that develop your skills, understanding and perceptions that can be documented to provide evidence across all six attributes
- **Find a mentor** – a very beneficial action is to find a mentor, ideally from the industry (but not a family member), to guide you, challenge you and help you proactively get the experience that will provide the evidence across all six attributes
- **Review how you spend your time outside UOW** – there are considerable everyday activities that you undertake that will give you the basis to provide evidence across all six attributes. This could include:
surf clubs; sporting clubs (e.g. football, netball, tennis, rugby, swimming, hockey, baseball etc.); any organised team activity; planning, organising and delivering any event (e.g. weddings, celebrations, community events) in any role; learning a second language; overseas travel or residency; music; craft; arts; coaching; technical official/referee; dancing; theatre; and belonging and contributing to organisations (e.g. Beyond Blue, Community Cancer Link, Lifeline, Rotaract, ethnic and indigenous associations; and university exchange programs
- **What else do you know about or can you think of? Get out there and find out.**



TECHNICAL SKILLS

The following attributes showcase your application of professional and technical knowledge and standards.

According to the 2016 QILT data employee satisfaction across universities stands at the highest level of 92.2% suggesting that almost all students present good technical capability. Therefore, you will need some very good evidence to show how you stand out from other students.

The technical attributes are:

21. Applying professional knowledge to job tasks
22. Using technology effectively
23. Applying technical skills in the workplace
24. Maintaining professional standards
25. Applying ethical standards
26. Capacity to integrate social, cultural, environmental and sustainability considerations
27. Using research skills to gather evidence

UOW First Year Coursework Evidence

- **All Subjects:** Each subject will have its own unique form of evidence in building technical competency. Some examples:
- **ENGG102:** The field trip provides some examples of social, cultural, environmental and sustainability considerations
- **ENGG103:** The laboratory reports demonstrate your technical proficiency. Evidence from the guest lectures
- **ENGG104:** The laboratory component showcases the implementation of technical skills
- **ENGG105:** This subject provides substantial evidence, especially through the design report, across all attributes.
- **PHYS143:** The laboratory component showcases the implementation of technical skills

UOW Extra Curricular Evidence

- **UOW Solar Decathlon:** Within the solar decathlon you compete in a global competition and examples can be drawn out that provide evidence for all seven attributes. Upload pictures, videos, designs etc. of your contribution.
- **UOW SAE Race Team:** Within SAE you compete in a national competition and examples can be drawn out that provide evidence for all seven attributes. Upload pictures, videos, designs etc. of your contribution.
- **Professional and industry societies** (e.g. IEEE Student Branch): Membership is to a professional organisation allowing you to develop all seven attributes. In particular, you can be invited to work on developing new or reviewing old standards; great forms of evidence.
- **Careers Central – Univariate:** Use this program to obtain consultancy experience gaining real industry experience. Use the projects to provide examples of how you meet the seven attributes.
- **Careers Central - Jobs on Campus:** Not all work experience needs to be engineering experience. Undertaking work in a variety of fields develops evidence across all nine attributes. In particular, look to express evidence of how you used your engineering knowledge and skills and adapt it to other environments.
- **Work Experience:** Your compulsory work experience will provide you with many forms of evidence across the seven attributes.

External Evidence

- **Part-time work in any field** will provide experiences that develop your skills, understanding and perceptions that can be documented to provide evidence across all seven attributes
- **Find a mentor** – a very beneficial action is to find a mentor, ideally from the industry (but not a family member), to guide you, challenge you and help you proactively get the experience that will provide the evidence across all seven attributes
- **Review how you spend your time outside UOW** – there are considerable everyday activities that you undertake that will give you the basis to provide evidence across all seven attributes. This could include: surf clubs; sporting clubs (e.g. football, netball, tennis, rugby, swimming, hockey, baseball etc.); any organised team activity; planning, organising and delivering any event (e.g. weddings, celebrations, community events) in any role; learning a second language; overseas travel or residency; music; craft; arts; coaching; technical official/referee; dancing; theatre; and belonging and contributing to organisations (e.g. Beyond Blue, Community Cancer Link, Lifeline, Rotaract, ethnic and indigenous associations; and university exchange programs.
- **Teamwork:** It is very important that your evidence provides examples of both highly and poorly performing teams and what lessons your learnt
- **What else do you know about or can you think of? Get out there and find out.**



EMPLOYABILITY SKILLS

The following attributes showcase your ability to ability to perform and innovate in the workplace.

According to the 2016 QILT data employee satisfaction across universities stands at 83.8% the lowest across all generic skills. This suggests that many students do not fully appreciate the opportunity to develop these skills at university. Therefore building a strong portfolio of employability skills could help differentiate you from other students.

The employability attributes are:

28. Ability to work under pressure
29. Capacity to be flexible in the workplace
30. Ability to meet deadlines
31. Understanding the nature of the business or organisation (especially governance, client and stakeholder management)
32. Demonstrating leadership skills
33. Demonstrating management skills
34. Taking responsibility for personal and professional development (including demonstrating awareness of career related employment opportunities, transition skills and knowledge of recruitment process)
35. Demonstrating initiative in the workplace
36. Finance and economic management
37. Information management (work in a digital world)

UOW First Year Coursework Evidence

- **All subjects:** Developing a history of submitting all work across all subjects on time (and passing) is a good form of evidence to show that you can work under pressure and meet deadlines.
- **ENGG100:** Do you show leadership and management skills in the group project?
- **ENGG105:** In this subject you are required to develop a strong understanding of the client. Therefore your assessments such as the design report form strong evidence.
- **Career Ready:** Using this e-portfolio effectively is a good example of information management and professional development

UOW Extra Curricular Evidence

- **UOW Solar Decathlon:** Within the solar decathlon you work on a diverse range of projects and examples can be drawn out that provide evidence for most of the eleven attributes. Upload meeting minutes, project plans, and complimentary emails etc. that showcase these attributes.
- **UOW SAE Race Team:** Within SAE you work on a diverse range of projects and examples can be drawn out that provide evidence for most of the ten attributes. Upload meeting minutes, project plans, and complimentary emails etc. that showcase these attributes.
- **UOW Society Membership:** By joining a society you have an opportunity to take one of many leadership roles, steering the direction and development of the members. You can become responsible for budgets and reporting providing evidence across many of the attributes.
- **Professional and industry societies:** You have an opportunity to take one of many leadership roles, not only at the branch level but also at the national and regional levels. Leaders are responsible for setting up and meeting key performance indicators and completing/analysing many reports. It is important to show the lessons learned from the leadership roles.
- **Careers Central – Univariate:** Use this program to obtain consultancy experience gaining real industry experience. Use the projects to provide examples of how you meet the ten attributes.
- **Careers Central - Jobs on Campus:** Not all work experience needs to be engineering experience. Undertaking work in a variety of fields develops evidence across all nine attributes. In particular, look to express evidence of how you used your engineering knowledge and skills and adapt it to other environments.
- **Careers Central - Career Smart:** Use this program to identify skills that you have and the skills employers want. As evidence show how you have set a path for your own personal and professional development.
- **Work Experience:** Your compulsory work experience will provide you with many forms of evidence across the ten attributes.

External Evidence

- **Part-time work in any field** will provide experiences that develop your skills, understanding and perceptions that can be documented to provide evidence across all ten attributes
- **Find a mentor** – a very beneficial action is to find a mentor, ideally from the industry (but not a family member), to guide you, challenge you and help you proactively get the experience that will provide the evidence across all ten attributes



- **Review how you spend your time outside UOW** – there are considerable everyday activities that you undertake that will give you the basis to provide evidence across all ten attributes. This could include:
surf clubs; sporting clubs (e.g. football, netball, tennis, rugby, swimming, hockey, baseball etc.); any organised team activity; planning, organising and delivering any event (e.g. weddings, celebrations, community events) in any role; learning a second language; overseas travel or residency; music; craft; arts; coaching; technical official/referee; dancing; theatre; and belonging and contributing to organisations (e.g. Beyond Blue, Community Cancer Link, Lifeline, Rotaract, ethnic and indigenous associations; and university exchange programs.
- **What else do you know about or can you think of? Get out there and find out.**



OTHER SKILLS

This section is a blank section within your e-portfolio. It allows you to collect evidence on discipline specific matters of interest. Think about what matters the most in your discipline. If you have a specific job in mind look at job advertisements and list and skills not included within this document.

Remember, employers are looking for people whose knowledge, skills and personal attributes are a good fit with their needs and team culture. This e-portfolio tool will give you the best possible evidence when you are applying for specific positions with employers.



Appendix A

The attributes are mapped to Engineering Australia Stage 1 Competencies and in-depth understanding of what these attributes mean for an engineer can be found at:

<https://www.engineersaustralia.org.au/resource-centre/resource/stage-1-competency-standard-professional-engineer>

The attributes are also mapped to AusIMM Attributes

Generic Skill	Attributes	EA Competency	AusIMM Attributes
Adaptive Skills	1. Broad background knowledge	1.1, 1.3 & 1.6	6
	2. Ability to identify new opportunities	3.3	4
	3. Ability to adapt knowledge to different contexts	2.3	2
	4. Ability to apply skills in different contexts	1.5	4
	5. Capacity to work independently	3.5	2
Foundation Skills	6. Oral communication skills (technical and non-technical audiences)	3.2	10
	7. Written communication skills (technical and non-technical audiences)	3.2	9
	8. Numeracy skills	1.2	3
	9. Ability to develop relevant knowledge	1.4	5
	10. Ability to develop relevant skills	3.5	5
	11. Ability to solve problems (including demonstrated ability to show engineering methods)	2.1	3
	12. Ability to integrate knowledge	1.5	8
	13. Ability to think independently about problems	2.2	2
Teamwork Skills	14. Ability to apply Work, Health & Safety knowledge	2.3	1
	15. Working well in teams	3.6	7
	16. Getting on well with others in the workplace	3.6	7
	17. Working collaboratively with colleagues to complete tasks	3.6	7
	18. Develop networks	3.3	6
	19. Understanding different points of view (stakeholder & user perspectives)	3.6	7
Technical Skills	20. Ability to interact with co-workers from different or multi-cultural backgrounds	3.6	8
	21. Applying professional knowledge to job tasks	2.1	5
	22. Using technology effectively	2.2	5
	23. Applying technical skills in the workplace	2.3	3
	24. Maintaining professional standards	2.1	1
	25. Applying ethical standards	3.1	1
	26. Capacity to integrate social, cultural, environmental and sustainability considerations	2.3	3
Employability Skills	27. Using research skills to gather evidence	2.1	8
	28. Ability to work under pressure	3.5	3
	29. Capacity to be flexible in the workplace	2.4	8



	30. Ability to meet deadlines	2.4	4
	31. Understanding the nature of the business or organisation (especially governance, client and stakeholder management)	2.3	6
	32. Demonstrating leadership skills	3.6	7
	33. Demonstrating management skills	2.4	8
	34. Taking responsibility for personal and professional development (including demonstrating awareness of career related employment opportunities, transition skills and knowledge of recruitment process)	3.5	2
	35. Demonstrating initiative in the workplace	3.3	4
	36. Finance and economic management	2.4	6
	37. Information management (work in a digital world)	3.4	6

Chartered Self-Assessment

For students planning on becoming a chartered engineer in the future, this process of reflection and evidence collecting is very important. Students can undertake a self-assessment using the following tool to discover the importance of collecting evidence and mapping it to various attributes, and how it will be used into the future:

<https://www.engineersaustralia.org.au/portal/chartered/self-assessment>



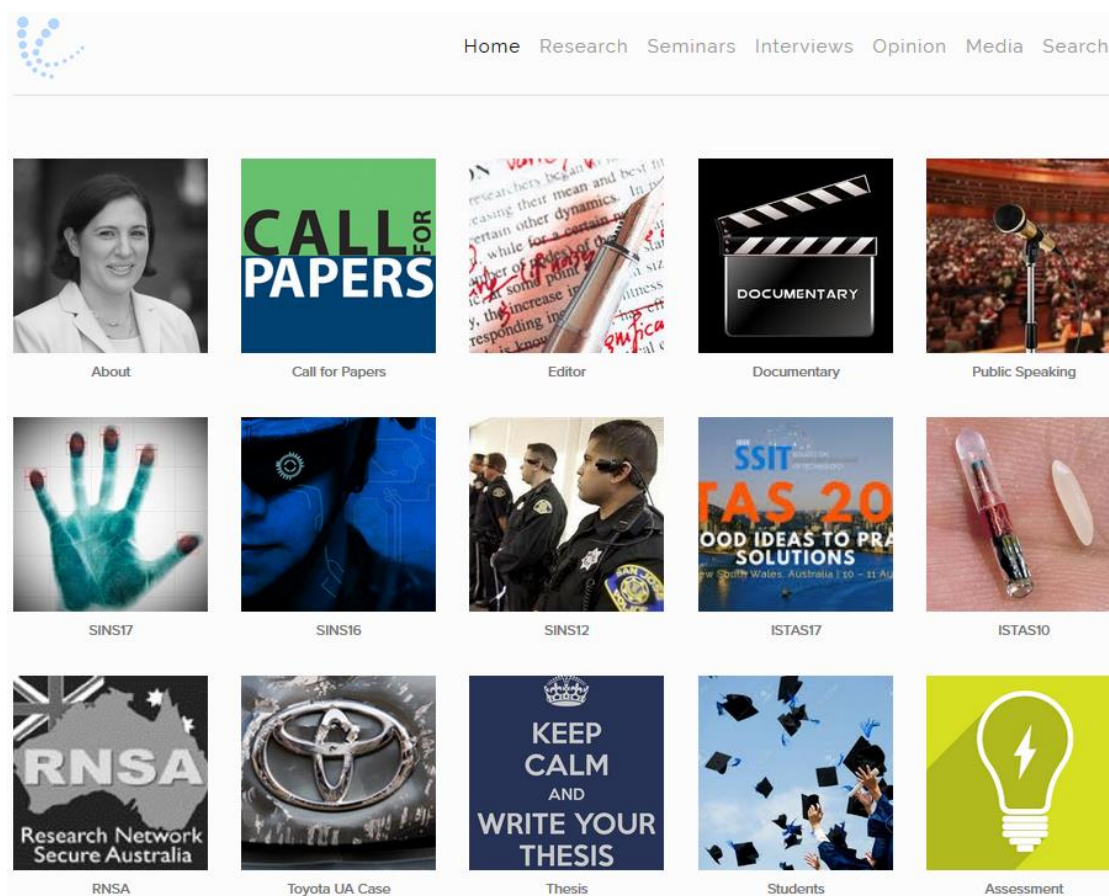
Appendix B

The e-portfolio acts as a database of evidence that you can store and use in the future as needed. You never know when you may need a particular form of evidence – even more important when you are in the workforce and hunting for a promotion! However, what you show to the public should be specifically targeted to your objectives. Suggestions:

1. Use social media such as LinkedIn to provide exposure of your achievements and connect to business professionals around the world. However, simply having a profile and not engaging with the community will not get you very far. You need to engage if you would like to stand out. Link your profile to your email signature.
2. Create a personalised and professional e-portfolio that resembles you and your skills and achievements. Link your portfolio to your email signature.

Examples of e-portfolio's includes: <http://www.katinamichael.com/> and <http://vitomir.kovanovic.info/>

Screen Capture of Katina Michael e-Portfolio



Change Control

INITIAL IMPLEMENTATION

Year: 2017

Project Lead: Sasha Nikolic (EIS)

EIS Team Members: Raymond Tolhurst and Rodney Vickers

Project Support: Danielle Caton

Project Advisory:

- *Careers Unit:* Nuala O'Donnell, Tracey Glover-Chambers, Simon Davie
- *Engineering Advisory Sub Committee:* Greg Klamus, Darren Frost, Garry Kennedy, Michael Muston, Tahnee Lowe

VERSION CONTROL

V1.0	Program initiation	01 January 2018	Project Team
V1.1	Corrections to text	05 February 2018	Sasha Nikolic
V1.2	Additional forms of evidence added	04 April 2018	Sasha Nikolic

