



# ENGG400

## Industry Experience

S1 External 2016

*Dept of Engineering*

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#### **Disclaimer**

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## General Information

Unit convenor and teaching staff

Dr Nazmul Huda

[nazmul.huda@mq.edu.au](mailto:nazmul.huda@mq.edu.au)

Contact via 02 9850 9598

Office location: E6B 143

Consultation hours: Thursday 2.00 to 3.00 pm/ Friday 2.00 to 3.00 pm

Credit points

0

Prerequisites

39cp including 6cp at 200 level including ENGG200

Corequisites

Co-badged status

Unit description

It is a requirement of the Bachelor of Engineering degree that students complete at least 12 weeks (ie, 60 days, full-time) of relevant work experience in industry before graduation.

Students should enrol in this unit as soon as they complete the prerequisites. This unit is assessed on the basis of detailed records of work experience recorded in a dedicated log book.

Please note that it is the personal responsibility of students to obtain industry work experience to satisfy the requirements of the Bachelor of Engineering degree. Students who have completed an equivalent final-year industry project can ask for credit in this unit by fulfilling the unit and PACE requirements (submitting a separate report, logbook and certificate from industry supervisor).

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

## Learning Outcomes

On successful completion of this unit, you will be able to:

Develop engineering techniques and skills related to professional engineering applications

Build awareness of occupational health and safety issues in engineering workplaces

Develop professional conduct and learn workplace behavior as an early career engineer  
Build strong communication skills through report writing and team work activity

## General Assessment Information

Upon completion of 12 weeks of work experience, provide to Unit Convenor

- Log book(s) – A diary with daily activities and dates on it
- Report (as specified in Unit Guide)
- Certification form(s) (signed by industry partner(s))

Please refer to the link below for further details and all the resources:

[http://www.engineering.mq.edu.au/students/undergrad/work\\_experience/](http://www.engineering.mq.edu.au/students/undergrad/work_experience/)

## Assessment Tasks

Name	Weighting	Due
<a href="#"><u>Final Report</u></a>	50%	29/06/2016
<a href="#"><u>Log book</u></a>	30%	29/06/2016
<a href="#"><u>Certificate</u></a>	20%	29/06/2016

### Final Report

Due: **29/06/2016**

Weighting: **50%**

Final report

On successful completion you will be able to:

- Develop engineering techniques and skills related to professional engineering applications
- Build awareness of occupational health and safety issues in engineering workplaces
- Develop professional conduct and learn workplace behavior as an early career engineer
- Build strong communication skills through report writing and team work activity

### Log book

Due: **29/06/2016**

Weighting: **30%**

Log Book/ Record of daily activities

On successful completion you will be able to:

- Develop engineering techniques and skills related to professional engineering applications
- Build awareness of occupational health and safety issues in engineering workplaces
- Develop professional conduct and learn workplace behavior as an early career engineer
- Build strong communication skills through report writing and team work activity

## Certificate

Due: **29/06/2016**

Weighting: **20%**

Certificate from industrial supervisor

On successful completion you will be able to:

- Develop engineering techniques and skills related to professional engineering applications
- Build awareness of occupational health and safety issues in engineering workplaces
- Develop professional conduct and learn workplace behavior as an early career engineer
- Build strong communication skills through report writing and team work activity

## Delivery and Resources

- ENGG400 is a PACE unit. PACE stands for Professional and Community Engagement. By connecting students with partner organisations, PACE gives Macquarie students the chance to contribute their academic learning, enthusiasm and fresh perspective to the professional workplace.
- PACE is Macquarie's way of integrating practical experience into your degree so it counts for credit, gives you the chance to work with different communities, and ultimately gives you the edge in your career.
- PACE is a key component of the University's strategic direction, emphasising the University's commitment to excellence in research, learning and teaching and community engagement. It is the third pillar of the undergraduate curriculum; People, Planet and Participation.
- PACE units provide an academic framework through which students can engage with the community, learn through participation, develop their capabilities and build on the skills that employers value. By completing a PACE unit, students develop all these skills and capabilities, and also gain academic credit towards their degree.

Please refer to the link below for further details and all the resources:

[http://www.engineering.mq.edu.au/students/undergrad/work\\_experience/](http://www.engineering.mq.edu.au/students/undergrad/work_experience/)

- In this unit you will undertake a PACE activity – the experiential component of a PACE unit whereby students engage with the community through Participation. The activity may be carried out in a variety of modes such as block (a concentrated period) or over the course of the whole semester (e.g. limited hours per week), depending on the design of the unit. Similarly, the timing of the PACE activity for each student or group of students may be different depending on arrangements with the community-based partner.

## Unit Schedule

ENGG400 Workshop, Wednesday 9th March, 12.00 to 14.00 in E6B 136

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy [http://mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

**New Assessment Policy in effect from Session 2 2016** [http://mq.edu.au/policy/docs/assessment/policy\\_2016.html](http://mq.edu.au/policy/docs/assessment/policy_2016.html). For more information visit [http://students.mq.edu.au/events/2016/07/19/new\\_assessment\\_policy\\_in\\_place\\_from\\_session\\_2/](http://students.mq.edu.au/events/2016/07/19/new_assessment_policy_in_place_from_session_2/)

Assessment Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Complaint Management Procedure for Students and Members of the Public [http://www.mq.edu.au/policy/docs/complaint\\_management/procedure.html](http://www.mq.edu.au/policy/docs/complaint_management/procedure.html)

Disruption to Studies Policy [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](http://www.mq.edu.au/policy/docs/disruption_studies/policy.html) *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of Policy Central.

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: [https://students.mq.edu.au/support/student\\_conduct/](https://students.mq.edu.au/support/student_conduct/)

## Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.m](#)

[q.edu.au](http://q.edu.au).

### **Emergency Procedures:**

#### **What to do in the case of an emergency:**

1. Remove yourself from any danger.
2. Call 000, if necessary.
3. Speak to your partner-based supervisor, if possible. The Organisation may have emergency procedures to follow.

THEN - if the emergency occurs in office hours (i.e. Monday - Friday 9am-5pm)

4. Contact your Unit Convenor by phone/email as soon as you can.
5. If you cannot reach your Unit Convenor, contact your Faculty PACE Manager by phone/email.

OR - if the emergency occurs outside of office hours (i.e. outside of Monday - Friday 9am-5pm)

6. Phone Campus Security Office on (02) 9850-9999 as soon as you can. This is a 24 hour, 7 days a week service and it does not matter where in Australia you are when you call. Please identify yourself as a PACE student when you call.

N.B. For any minor issues with your participation activity, please speak to your partner-based Supervisor. If the problem is more serious, please contact your Unit Convenor or your Faculty PACE Manager.

If you are experiencing difficulties and need to speak to a counsellor:

Contact the MQ Counselling Service at Campus Wellbeing on 9850-7497 (Monday - Friday, 8am-6pm)

1800 MQ CARELINE (1800-227-367) - information and referral service (24 hours, 7 days a week)

If you would like to speak to a counsellor outside of office hours, you can also contact Lifeline on 13 11 14 (24 hours, 7 days a week).

### **Work, Health, and Safety (WHS)**

A PACE Activity is an experiential activity allocated to, and undertaken by, a student within a PACE unit which may take place in premises other than the University (usually the Partner Organisation's premises). When working or studying in non-University premises, the primary responsibility for the health and safety of our students becomes that of the Partner Organisation hosting the student. However, as a student, you also have a legal responsibility under the Workplace Health & Safety Act 2011 and the Macquarie University Health & Safety Policy to ensure the health and safety of yourself and of others in the workplace.

Each student has a moral and legal responsibility for ensuring that his or her work environment is conducive to good health and safety, by:

- ensuring that their work and work area is without risk to the health and safety of themselves and others
- complying with the University's and Partner Organisation's Work Health & Safety Policy and Procedures
- reporting hazards and incidents as they occur in accordance with University and Partner Organisation's policy
- actively participating in all health and safety activities and briefing sessions (eg emergency evacuation procedures, site inspections etc)

Each student is also required to advise their Unit Convenor or Faculty PACE Manager as soon as possible when:

- he/she feels unsafe at any stage during the PACE activity
- he/she did not receive a safety induction prior to the commencement of the activity covering: First aid, Fire and emergency evacuation; and Injury/incident reporting
- he/she did not receive any specialised instructions/training necessary to carry out the role
- an incident/accident happens (even when reported to the Partner Organisation/ supervisor and managed by them)

Non-compliance with the above may result in withdrawal of the student from the PACE Activity.

Students in the Faculty of Science and Engineering should also be familiar with Faculty-specific practices as appropriate:

<http://web.science.mq.edu.au/intranet/ohs/>

### **PACE-related policies, procedures, and other important information**

PACE Activity – Early Commencement Procedure: – to outline the conditions under which the unit convenor of a PACE unit will consider a request from a student to commence or complete a PACE activity prior to the official start date of the associated PACE unit.

[https://mq.edu.au/policy/docs/participation\\_activity/procedure\\_commencement.html](https://mq.edu.au/policy/docs/participation_activity/procedure_commencement.html)

PACE - Managing Other Commitments Procedure: to outline the University's approach to an absence or other form of disruption during the session due to a student undertaking a PACE activity.

[http://www.mq.edu.au/policy/docs/participation\\_activity/procedure.html](http://www.mq.edu.au/policy/docs/participation_activity/procedure.html)

PACE - Reasonable Adjustments, Guideline and Procedure: Macquarie University will endeavour to match students with an appropriate host and feasible PACE activity to maximise student success. These documents provide good practice information for students and staff to encourage early disclosure of circumstances (e.g. disability, medical condition, flexible time arrangements, or leave days for official observances, etc.), which may impact on a student's PACE activity, and the subsequent arrangement of reasonable adjustments when enrolling or



participating in a PACE Unit (Guideline).

[http://mq.edu.au/policy/docs/reasonable\\_adjust\\_pace/guideline.html](http://mq.edu.au/policy/docs/reasonable_adjust_pace/guideline.html)

[http://www.mq.edu.au/policy/docs/reasonable\\_adjust\\_pace/procedure.html](http://www.mq.edu.au/policy/docs/reasonable_adjust_pace/procedure.html)

PACE activities requiring background checks: Some partner organisations may require students to complete certain background checks and/or clearances in cases where they will be working with children, young people, people with disabilities, the frail-aged, at-risk clients, and government/statutory agencies. It's very important that students complete the required background clearances before beginning the PACE activity. Any necessary information on background checks will be communicated directly to students by the Unit Convenor or the Faculty PACE team.

Policy regarding PACE and the AHEGS statement: PACE units will be flagged on student transcripts with the symbol 'π' after the unit code and before the unit title. Students can highlight this designation to future employers and academic institutions as the following definition, which details the value of such units, will also be included after the list of units and before Special Achievements, Recognition and Prizes (if included) or the Key to Grading:

π: Units marked with a π are designated PACE units. These units provide students with an opportunity to learn through practical experience and make a valuable contribution to the community by applying knowledge and skills acquired at the University.

PACE and Ethical Practice: Ethical considerations feature heavily in the PACE Initiative. As ambassadors of the University, students are expected to engage with the wider community in a responsible and ethically informed manner that respects the rights of individuals, communities and the environment. This expectation applies to all PACE activities regardless of their nature. Ethical practice involves negotiating the ethical complexities of the context with which you are working. This involves critically thinking about issues of power, hierarchy, culture and position, and about the potential risks of your work and interactions with others, immediate and over time. It is important to ensure that risks are mitigated and experiences are enriching and worthwhile for all those involved.

In addition to the role of students as ambassadors, partners must conform to the University's ethical standards; PACE activities must be aligned with the wellbeing of people and planet; there are research-based PACE activities as well as collaborative research with partners; and, the way in which everybody's PACE experiences are captured and shared must be ethical. If a student ever feels that unethical behaviour has occurred during a PACE activity, they should consult with their Unit Convenors and/or the Faculty PACE staff immediately. Further, any students whose PACE activity will involve research must consult with their convenor prior to commencement to confirm whether or not research ethics permission is required.

PACE and IP: Students enrolled in PACE units may be working with external industry partners. Although it is uncommon, during some activities Intellectual Property may be created and there may be some instances when the partner requires the assignment of IP. Students are encouraged to seek legal advice prior to entering into any such agreement. Students uncertain of their rights relating to IP ownership can seek advice from the Office of the Deputy Vice-Chancellor (Research). This should be done by contacting the relevant Faculty PACE Manager.



PACE Grants and Prizes: There are several ways in which PACE might support students financially to undertake PACE activities. PACE students are also eligible to apply for the prestigious Prof. Judyth Sachs PACE Prizes.

[http://students.mq.edu.au/courses/professional\\_and\\_community\\_engagement/pace\\_grants/](http://students.mq.edu.au/courses/professional_and_community_engagement/pace_grants/)

[http://students.mq.edu.au/courses/professional\\_and\\_community\\_engagement/pace\\_prizes/](http://students.mq.edu.au/courses/professional_and_community_engagement/pace_prizes/)

## Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

## Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

## Graduate Capabilities

### Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

## Learning outcomes

- Develop engineering techniques and skills related to professional engineering applications
- Develop professional conduct and learn workplace behavior as an early career engineer
- Build strong communication skills through report writing and team work activity

## Assessment task

- Final Report

## Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

## Learning outcomes

- Develop engineering techniques and skills related to professional engineering applications
- Build awareness of occupational health and safety issues in engineering workplaces
- Develop professional conduct and learn workplace behavior as an early career engineer

## Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

## Learning outcomes

- Develop engineering techniques and skills related to professional engineering applications
- Build awareness of occupational health and safety issues in engineering workplaces
- Develop professional conduct and learn workplace behavior as an early career engineer

## Assessment tasks

- Final Report

- Certificate

## Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

### Assessment task

- Certificate

## Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

### Assessment task

- Final Report

## Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

### Learning outcome

- Develop engineering techniques and skills related to professional engineering applications

## Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to

read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

## **Learning outcomes**

- Develop engineering techniques and skills related to professional engineering applications
- Develop professional conduct and learn workplace behavior as an early career engineer
- Build strong communication skills through report writing and team work activity

## **Assessment tasks**

- Final Report
- Log book
- Certificate

## **Engaged and Ethical Local and Global citizens**

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

## **Learning outcomes**

- Develop engineering techniques and skills related to professional engineering applications
- Build awareness of occupational health and safety issues in engineering workplaces
- Develop professional conduct and learn workplace behavior as an early career engineer
- Build strong communication skills through report writing and team work activity

## **Assessment tasks**

- Final Report
- Log book

## **Socially and Environmentally Active and Responsible**

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active

participants in moving society towards sustainability.

This graduate capability is supported by:

## **Learning outcomes**

- Develop engineering techniques and skills related to professional engineering applications
- Build awareness of occupational health and safety issues in engineering workplaces
- Develop professional conduct and learn workplace behavior as an early career engineer