



FOSC300

Participation and Community Engagement in Science and Engineering

S2 External 2019

Science and Engineering Faculty level units

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Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

General Information

Unit convenor and teaching staff

Convenor

Katherine McClellan

katherine.mcclellan@mq.edu.au

6 Science Road (E8B) room 213

Credit points

3

Prerequisites

(39cp at 100 level or above) and permission by special approval

Corequisites

Co-badged status

Unit description

All students seeking Special Approval for FOSC300 must consult with the FSE PACE Team by self-enrolling in the iLearn Community Unit [<http://ilearn.mq.edu.au/course/view.php?id=26740>] and reviewing available information. Requests for Special Approval must be made no later than 4 weeks before the start of session. This unit provides an opportunity for students to engage with the community through a variety of activities. Examples might include individual and group activities with an international, regional or local focus on public-sector agencies, professional bodies, companies, industry partners and not-for-profit organisations. The unit promotes learning through participation with community partners as well as the development of graduate capabilities and professional skills. Students will be encouraged to apply theory learnt through their degree to real-world situations. Student learning will be facilitated through orientation and induction activities, scaffolding for skill, and knowledge development and debriefing; supported throughout by rigorous academic assessment.

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:

Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and

Engineering.

Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.

Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.

Recognise how their engagement with the community has facilitated mutually beneficial opportunities for the generation and the sharing of knowledge.

Understand the ways in which they have, through engagement with the community, actively contributed to the well-being of people and the planet.

Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>iLearn Posts 1 and 2</u>	10%	No	01/08/2019 and 24/10/2019
<u>Cover Letter</u>	20%	No	18/8/2019
<u>Quiz</u>	20%	No	08/09/2019
<u>Mind the Gap! (Steps 1 and 2)</u>	20%	No	25/8/2019 and 07/10/2019
<u>Reflective Praxis</u>	30%	No	10/11/2019

iLearn Posts 1 and 2

Due: **01/08/2019 and 24/10/2019**

Weighting: **10%**

250 words per post. See iLearn site for full description when enrolled in the unit.

On successful completion you will be able to:

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.

- Recognise how their engagement with the community has facilitated mutually beneficial opportunities for the generation and the sharing of knowledge.
- Understand the ways in which they have, through engagement with the community, actively contributed to the well-being of people and the planet.
- Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Cover Letter

Due: **18/8/2019**

Weighting: **20%**

Apply unit content to highlight your skills in 500-750 words (one page only). See iLearn site for full description when enrolled in the unit.

On successful completion you will be able to:

- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.
- Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Quiz

Due: **08/09/2019**

Weighting: **20%**

Short answer questions, max 1,250-1,500 words. See iLearn site for full description when enrolled in the unit.

On successful completion you will be able to:

- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.
- Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Mind the Gap! (Steps 1 and 2)

Due: **25/8/2019 and 07/10/2019**

Weighting: **20%**

Step 1: Craft an interview style question to ask of classmate

Step 2: Create 5 minute audio visual presentation that articulates your employability and addresses the two questions asked of you. See iLearn site for full description when enrolled in the unit.

On successful completion you will be able to:

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.
- Recognise how their engagement with the community has facilitated mutually beneficial opportunities for the generation and the sharing of knowledge.
- Understand the ways in which they have, through engagement with the community, actively contributed to the well-being of people and the planet.
- Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Reflective Praxis

Due: **10/11/2019**

Weighting: **30%**

A three part reflective analysis of your practice that synthesises your capabilities, learning and experiences over the unit. See iLearn site for full description when enrolled in the unit.

On successful completion you will be able to:

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.

- Recognise how their engagement with the community has facilitated mutually beneficial opportunities for the generation and the sharing of knowledge.
- Understand the ways in which they have, through engagement with the community, actively contributed to the well-being of people and the planet.
- Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Delivery and Resources

FOSC300 is available in both internal and external modes. It involves a series of on-campus workshops (recorded via Echo360 ALP and available through iLearn), on-line Modules and tasks, and a PACE activity. Workshops involve a lot of student engagement and regardless of enrolment type, students should continuously participate (in person or online). If in person, this could involve physical attendance even if for a limited portion of the workshop. If in-person attendance of workshops is not possible (e.g. due to location, timetable clash, etc.) students need to engage with content, practical exercises, and classmates online in a timely manner. There will be 2 x 1.5 hour workshops held in select weeks of the session –each workshop presents new content.

The required activities for FOSC300 will vary from week to week depending on the nature of the delivery (in-class workshop or on-line) and the timing of individual PACE activities. Please refer to the Unit Schedule on pages 10-12 of the full unit outline (available through the FOSC300 pre-enrolment iLearn site) throughout the semester to confirm the delivery mode (i.e. in-class workshops, on-line learning etc.) at any given time. iLearn Announcements will inform of any changes to this plan.

Required and recommended reading:

There is no required text book for FOSC300; however, in conjunction with workshops, on-line learning, and assessments there will be a number of resources that students must read and research. With the exception of those materials which are researched independently by the student (e.g. for assessments), all resources will be made available electronically through the FOSC300 iLearn site.

Unit Schedule

In-person workshops (also available online via Live Streaming and recordings via Echo360 ALP):

- **Mondays, 10:30-12pm in 9 Wally's Walk (E6A) Rm. 109**
 - July 29, August 5, August 12, & October 28 (4 in total)
- **Tuesdays, 4-5:30pm in 12 Second Way (C5A) Rm. 304**
 - July 30, August 6, August 13, October 22, & October 29 (5 in total)

In-person consultations (Assessment 2 feedback), 5 sessions with students scheduled for

specific times:

- Monday 2 September 10am-12pm
- Tuesday 3 September 9:30-11:30am
- Tuesday 3 September 2.30-5pm
- Wednesday 4 September 2.30-5pm
- Monday 9 September 10am-12pm
- Tuesday 10 September 2.30-5pm

A quick reference guide to each week:

Wk	Date & Time	Workshops and On-line Modules	Mode of delivery	Required resources/ workshop prep	PACE activity	Assessment
1	Monday 10:30am-12pm 29/7/19	Who do you think you are? (FOSC300 and your employability)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class	Prior to the workshop read: FOSC300 unit outline	Generally most PACE activities do not commence prior to, or during Week 1, of the session. If you need to start by this time, please ensure you consult with the FSE PACE Team well in advance of session start	
1	Tuesday 4-5:30pm 30/7/19	Are you experienced? (Exploring your Graduate Capabilities & Reflection Part I)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class	Prior to the workshop read: (1) Pages 5-7 of the unit outline; (2) The iLearn Announcement with preparation instructions for Workshop 2		Assessment 1: iLearn post 1 due by Thursday 1/8, 11:55 pm
2	Monday 10:30am-12pm 5/8/19	Impostor syndrome? (Career Skills: writing effective cover letters)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class	Prior to the workshop read: (1) How to write a cover letter' (Gallo, 2014); (2) Using the STAR technique to shine' (Higgins, 2014); (3) How to master the STAR method' (Simpson, 2018)	PACE activities may commence if confirmed by the FSE PACE Team. Activities take place at a location identified by the community partner. Resources are as provided by the community partner.	
2	Tuesday 4-5:30pm 6/8/19	What's in it for everybody? (Reciprocity and Mutual Benefit)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class	Prior to the workshop read: 'Language Matters: Reciprocity and Its Multiple Meanings' (Hammersley, 2017)	Ongoing	

3	Monday 10:30am-12pm 12/8/19	Expect the unexpected! (PACE Ethical Practice Part I)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class	Prior to the workshop read: (1) the NHMRC Preamble; Then complete: (2) The Trolley Problem (online exercise)	Ongoing	
3	Tuesday 4-5:30pm 13/8/19	Tell us what you really know (Communicating Science)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class	Prior to the workshop read: (1) 'The Higgs Boson: Why Should You Care?' and (2) 'Higgs Boson: Failure to Communicate'	Ongoing	Assessment 2: Cover letter due by Sunday 18/8/2019, 11:55 pm
4	19/8/19 or as your schedule allows	See yourself in a broader context (Introduction to Social Inclusion)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class	Resources as listed in iLearn – students must work through all independently	Ongoing	
4	20/8/19 or as your schedule allows	Grappling with the 'grey areas' (PACE Ethical Practice Part II)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class	Resources as listed in iLearn – students must work through all independently	Ongoing	Assessment 4: Mind the gap! Step 1 due Sunday 25/8/19, 11:55pm
5	26/8/19 or as your schedule allows	Contemplating your options (Reflection Part II)	Online - private study	Resources as listed in iLearn – students must work through all independently	Ongoing	
5	27/8/19 or as your schedule allows	Now what? (Career Skills: translating experience to outcomes)	Online - private study	Resources as listed in iLearn – students must work through all independently	Ongoing	
6	as your schedule allows	No classes	Private study		Ongoing	Assessment 3: Quiz due Sunday 8/9/19, 11:55pm

7	as your schedule allows	Individual consultations re: Assessment 2 (Cover letter) Individual consultation schedule will be available on iLearn tab	In-person: primarily in office, otherwise via phone or Skype	In order to undertake a consultation you must submit Assessment 2 Prior to your scheduled consultation, review the feedback found in your submission via Turnitin link (Gradebook)	Ongoing	
Mid-session break		No classes			Ongoing	
8	as your schedule allows		Private study		Ongoing	Assessment 4: Mind the gap! Step 2 due Monday 7/10/19, 11:55pm
9	as your schedule allows		Private study		Ongoing	
10	as your schedule allows		Private study		Ongoing	
11	Tuesday 4-5:30pm 22/10/19	Mind the gap! Awards (Assessment 4)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class	In order to be eligible for you must submit Assessment 4	Ongoing	Assessment 1: iLearn post 2 due by Thursday 24/10/19, 11:55pm
12	Monday 10:30am-12pm 28/10/19	Objects in mirror are closer than they appear (Challenging ways of seeing, thinking, doing, and being)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class		Ongoing	
12	Tuesday 4-5:30pm 29/11/19	The Butterfly Effect (Unit de-brief and Overview)	Internals: in person in classroom, or live streamed Externals: recording available via Echo360 several hours after class		Ongoing	

13		Private study	Activities need to be wrapped up by the time the Reflective Praxis is submitted unless otherwise agreed upon.	Assessment 5: Reflective Praxis due by Sunday 10/11/19, 11:55pm
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Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Undergraduate students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/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/study/getting-started/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) 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.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

General information about PACE and PACE forms

General information about PACE is provided through the FOSC300 pre-enrolment iLearn site

(e.g. partner-facing brochures etc.). Additional information can be found through the following webpage:

<https://students.mq.edu.au/experience/practical-experience/pace-experience>

There are several ways in which PACE might support students financially to undertake PACE activities. PACE Travel Grant information can be found here:

<https://students.mq.edu.au/experience/practical-experience/pace-experience/where-can-i-go/apply-for-a-grant>

PACE Activity – Early Commencement (now a part of the PACE Activity Management 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://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/pace-activity-management>

PACE - Managing Other Commitments (now a part of the PACE Activity Management 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.

<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/pace-activity-management>

PACE - Reasonable Adjustments (now a part of the PACE Activity Management 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).

<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/pace-activity-management>

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. Please note there is an extra verification step required for students who need to complete a Working with Children Check. Students will be required to provide their WWCC number to the Faculty PACE Team electronically and the result of their check will need to be verified by MQ WWCC Administrator (Governance Services) before they start their activity.

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 should discuss ethics requirements and any relevant training with their activity supervisor.

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 Prizes: PACE students can be eligible to apply for the prestigious Prof. Judyth Sachs PACE Prizes.

<https://students.mq.edu.au/experience/practical-experience/pace-experience/apply-for-a-prize>

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) 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

If you are a Global MBA student contact globalmba.support@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/.

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

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.
- Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Assessment tasks

- iLearn Posts 1 and 2
- Cover Letter
- Quiz
- Mind the Gap! (Steps 1 and 2)
- Reflective Praxis

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

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
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- Cover Letter
- Quiz
- Mind the Gap! (Steps 1 and 2)
- Reflective Praxis

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

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.
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- Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Assessment tasks

- iLearn Posts 1 and 2
- Cover Letter
- Quiz
- Mind the Gap! (Steps 1 and 2)
- Reflective Praxis

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:

Learning outcomes

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.
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Assessment tasks

- Mind the Gap! (Steps 1 and 2)
- Reflective Praxis

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:

Learning outcomes

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.

- Recognise how their engagement with the community has facilitated mutually beneficial opportunities for the generation and the sharing of knowledge.
- Understand the ways in which they have, through engagement with the community, actively contributed to the well-being of people and the planet.
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Assessment tasks

- iLearn Posts 1 and 2
- Cover Letter
- Quiz
- Mind the Gap! (Steps 1 and 2)
- Reflective Praxis

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 outcomes

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
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Assessment tasks

- iLearn Posts 1 and 2

- Cover Letter
- Quiz
- Mind the Gap! (Steps 1 and 2)
- Reflective Praxis

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

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.
- Understand the ways in which they have, through engagement with the community, actively contributed to the well-being of people and the planet.
- Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Assessment tasks

- iLearn Posts 1 and 2
- Cover Letter
- Quiz
- Mind the Gap! (Steps 1 and 2)
- Reflective Praxis

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

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and Engineering.
- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.
- Recognise how their engagement with the community has facilitated mutually beneficial opportunities for the generation and the sharing of knowledge.
- Understand the ways in which they have, through engagement with the community, actively contributed to the well-being of people and the planet.
- Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Assessment tasks

- iLearn Posts 1 and 2
- Quiz
- Mind the Gap! (Steps 1 and 2)
- Reflective Praxis

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

- Critically reflect on the development of Graduate Capabilities as well as their overall experience in the PACE unit: Participation and Community Engagement in Science and

Engineering.

- Have an enhanced sense of ways in which they have more broadly contributed to a socially inclusive and sustainable society through the Faculty of Science and Engineering PACE unit as a whole.
- Apply the knowledge they have acquired in the classroom to real life situations such as those experienced in their PACE activity.
- Recognise how their engagement with the community has facilitated mutually beneficial opportunities for the generation and the sharing of knowledge.
- Understand the ways in which they have, through engagement with the community, actively contributed to the well-being of people and the planet.
- Apply to their future career paths an understanding of core concepts such as ethics, career skills, and social inclusion as well as broad themes relevant to Science such as communicating science.

Assessment tasks

- iLearn Posts 1 and 2
- Quiz
- Mind the Gap! (Steps 1 and 2)
- Reflective Praxis

Changes from Previous Offering

Student contributions to learning and teaching are a significant part of this unit. In each offering, students from different degree programs complete diverse PACE activities that are relevant to their skills and interests. Students share their knowledge and experiences through workshop discussions, exercises, and assessments – enabling peer-to-peer learning that is never the same, twice. Unit content consistently evolves as a result of ideas, resources, theories, tips, etc. that students inspire and introduce. Former students also co-create curriculum as well as share wisdom, knowledge, experiences, and insights from beyond undergraduate study.

In July 2017 and July 2018, FOSC300 alumni co-created FOSC300 curriculum as a part of ongoing refinements to the unit. These collaborations have produced exciting ideas and opportunities that have been integrated into the unit. Sincere thanks are due to:

Daniel Sloane (2014); Tanya Smith (2016); Kerstin Siegmund (2017); Ben Snowdon (2017); Bridget Campbell (2017); Justine Channing (2018); and Philip Kelso (2018).

Enrolment pre-requisites

In order to enrol in FOSC300 students require Special Approval. Special Approval is granted on the basis of:

- attendance of the pre-enrolment workshop (in person or virtually) and review of all

essential resources in the FOSC300 pre-enrolment iLearn site as confirmed by a declaration;

- meeting the 39cps pre-requisite at the time of requesting Special Approval;
- a projected PACE activity and partner organisation meeting the PACE criteria (e.g. mutual benefit, ethical, etc.);
- a projected PACE activity enabling the learning outcomes of the unit;
- a projected PACE activity and partner organisation meeting WHS and risk considerations.

Requests for Special Approval involve the submission of a PACE Student Profile – the link for which is available to students via the FOSC300 pre-enrolment iLearn site. Requests for Special Approval must be submitted no later than 4 weeks prior to the start of session (as published in the Handbook) unless otherwise communicated by staff. Eligible students will receive an email to confirm receipt of Special Approval, following which they should enrol in the unit via e-student asap. In cases where additional information is required or enrolment is not possible, students will be consulted by email.

Important note: Students who have a general requirement of PACE in their degree (e.g. a specific unit is not indicated in the Handbook but the general rules of the program in the Handbook state that a PACE unit must be completed) will not see a space for a PACE unit in their student planner. If you have PACE as a general requirement of your degree, and you would like to enrol in FOSC300 to meet this requirement, you will need to save elective space for FOSC300. If you have used all of your electives already, but have yet to complete a PACE unit, you will need to contact Student Connect via ask.mq after receiving Special Approval for enrolment, and request that they create room in your planner in order you can complete the PACE requirement of your degree. If you have already completed a PACE unit as a specific requirement of your degree program, you are welcome to enrol in FOSC300 provided you have space for an elective unit in your student planner.

Graduate Capabilities in relation to FOSC300

Discipline-specific knowledge and skills

Although FOSC300 is not Discipline-specific, students will have the opportunity to reflect and comment upon aspects of learning which are directly relevant to their areas of study through both assessment and workshops. Further, students may have the opportunity to apply Discipline-specific Knowledge and Skills to their PACE activity depending on the nature of that experience.

Critical, Analytical, and Integrative Thinking

Overall, the unit encourages students to connect theory learned in the classroom (over the course of their degrees and including that in FOSC300) with real world practice, and to explore the strengths and limitations of that theory in practical contexts. Further, assessments in this unit require students to be critically analytical in relation to compulsory content (e.g. ethics, career skills, and social inclusion) and that which is elective (e.g. communicating science), as well as integrative in thought in relation to synthesising unit material with learning outcomes.

Problem Solving and Research Capability

A number of PACE activities running through FOSC300 will be research-based and these will specifically challenge students to apply their problem solving and research capability. Further, in light of the inter-disciplinary nature of students and PACE activities, students will find themselves in situations whereby they must demonstrate competence in accessing, using and synthesising appropriate information. To do this regardless of program of study or expertise requires strong problem solving skills and research capabilities

Creative and Innovative

As detailed, both content delivered in this unit and the PACE activities oblige students to understand problems from multiple perspectives and/or devise a range of effective solutions. Encounters with the real world can often result in a realisation that what is learned in the classroom does not always apply in practice. In teaching students how to 'expect the unexpected' the intention is to foster their ability to respond to matters as they arise in real life, in a creative and innovative manner.

Effective Communication

FOSC300 involves 'participation' which is centred on engagement with the diverse communities around us. The ability to engage successfully demands effective communication and students will have the opportunity to hone these skills through the PACE activity in particular. The final assessment for this unit further requires students to effectively communicate their reflective analysis of their learning experience through a chosen format. By the end of the unit, students should have a heightened sense of the importance of effective communication and some of the ways in which it can be practiced.

Engaged and Ethical Local and Global Citizens & Socially and Environmentally Aware and Responsible

The learning outcomes of this unit are based on the principles of the well-being of people and the planet, mutual benefit, and contributions to a socially inclusive and sustainable society. In this way, unit content and the PACE activities in FOSC300 have been selected to enable student engagement as ethical local and global citizens as well as engagement as socially and environmentally active and responsible citizens. In particular, certain PACE activities will provide students with an opportunity to make a valuable and valued contribution to a socially disadvantaged, or otherwise marginalised population served by a partner organisation, while all are likely to give students an appreciation of the breadth and complexity of key ethical debates that arise in a particular field and give them the chance to engage in ethical reasoning. Further, in addition to learning about important subjects such as social inclusion, students will have the opportunity to gain real experiences of cross-cultural interactions, working on issues of both social and environmental concern, and develop skills such as leadership, group management, and cooperation.

Capable of Personal and Professional Judgment and Initiative & Commitment to Continuous Learning

This unit will not be easy to undertake and it will provide students with exciting opportunities and challenges both on campus and within the community. As such, in FOSC300 students will be

required to juggle competing priorities and exercise professional judgement throughout. Similarly, the portfolio process will require students to recognise and reflect on their own strengths and limitations and this necessitates ongoing professional and personal judgement and initiative. Finally, FOSC300 fosters a commitment to continuous learning for it promotes the exploration of possible future career options and engages students in a critically reflective practice whereby they must evaluate their own limitations, strengths and mistakes. This will ultimately help students understand the relevance of reflecting in general beyond their time at Macquarie University and the ongoing importance of the pursuit of learning.

Workload and PACE activity information

Workload expectation:

FOSC300 is a 3 credit point unit and it is generally expected that students will commit at least 3.3 hours per week per credit point in their studies. Thus, the total workload for a standard 3 credit point unit should be a minimum of 10 hours per week throughout the semester. However, as a PACE unit there is recognition that workload may vary in comparison to traditional unit offerings. This is due to teaching delivery which is in-class, on-line and in the community, differences in timing for PACE activities, and individual styles of learning.

Also, experience has indicated that students often choose to commit more time than required to their PACE activities in response to the associated personal and professional reward and learning opportunities which could not otherwise be achieved in the classroom. With this in mind, students should understand that workload associated with a 3 credit point unit must ultimately constitute 150 hours in total. The following workload hours apply to FOSC300 with the recognition that some variation may occur at the individual level:

- Workshops, online Modules, and associated preparation (i.e. review of online resources): 36 hours
- PACE activity: approximately 70 hours
- Assessments (all associated preparation): 32 hours
- Private study and reflection: 12 hours

Keeping track of PACE activity hours:

It is recommended that students maintain some sort of record (in hard or soft copy) that charts the number of hours they complete over the course of their PACE activity as well as key events and learning. This is to foster student learning and achievement - there is no formal log book or requirement for students to submit evidence of having completed the 70 hours of their PACE activity. Instead, a student's progress of their PACE activity will be monitored throughout via information provided in assessments as well as direct communication by FSE PACE staff with students and their PACE activity supervisor.

Roles and Responsibilities of PACE partners

- Host a student or group of students to undertake a PACE activity;

- Work with the University (and/or the student where appropriate) to design a PACE activity that satisfies the needs of the partner and the academic requirements of the unit;
- Nominate a supervisor who will provide support and supervision to the student/s;
- Provide sufficient resources/facilities for the student/s to undertake the PACE activity;
- Provide the student/s with an orientation at the beginning of the PACE activity informing them about: work health and safety requirements; emergency procedures; harassment, bullying and anti-discrimination policies; dress standards; confidentiality and privacy requirements; internet policies and ethical guidelines; any special training required for their role;
- Negotiate in good faith with the student/s if it is considered that their work during a PACE activity will, or is likely to generate Intellectual Property rights, and if required, enter into a separate agreement with the student/s relating to Intellectual Property rights ownership;
- Provide the required Work Health and Safety information to the University to enable the University to complete a risk assessment of the PACE activity prior to the student/s commencing the activity. This will include completion of a short WHS survey about the environment where the student will be working when based with the partner organization;
- Comply with the Work Health and Safety laws of the state or territory where the PACE activity will be undertaken;
- Advise the University and the student/s of any necessary clearances that the student/s will need to undertake the PACE activity (e.g. working with children check, police checks, vaccinations);
- Acknowledge, where possible, the student's role in authoring or contributing to any materials produced during the PACE activity;
- Provide the student with feedback on their work and help them to resolve any difficulties they experience;
- Contact the Unit Convenor or Faculty PACE Manager as soon as possible, should there be any changes or issues relating to the agreed activity or the student's participation.