

PACE in Science and Engineering

Professional and Community Engagement



MACQUARIE
University

Faculty of Science and Engineering PACE students have secured exciting jobs, gone fascinating places, and found their future direction - made possible by experiences with our growing number of dynamic partners.



Macquarie's unique PACE program (Professional and Community Engagement) gives students valuable practical experience. From 2016, PACE is a requirement of all undergraduate degree programs for newly enrolling students including those students transferring into a degree program for the first time. Through PACE, students and partner organisations focus on mutually beneficial outcomes and this can lead to students developing vital life and work skills which can help them move beyond university toward future endeavours and pathways. For example:

- engineering students brought the world of robotics to young students in Indonesia
- computing students developed a networking app to help backpackers find their way
- medical sciences students realised their dream of working in a radiology department
- marine science students found their career direction through an activity in animal husbandry

Students should review degree requirements in the Handbook

carefully and early to understand if there is a specific PACE unit they need to complete, or if they need to choose a PACE unit elective to meet a general PACE requirement of their degree. Students are also welcome to do more than one PACE unit through their electives.

PACE units combine theoretical content, assessments, reflective practice, and experiential activities (PACE activities) to enhance skill and knowledge development, and to enable students to make sense of what they have learnt.



CBMS308 students at CSIRO. Photographer: Josh King 2018

PACE UNITS IN FACULTY OF SCIENCE AND ENGINEERING IN 2019

Biological Sciences

Advanced Science (Biology)

BIOL388 | Mar - Nov | 84 hours

Biodiversity and Conservation

BIOL349 | Aug - Nov | 50 hours

Biology Special Interest Project

BIOL386 | Mar - Jun & Aug - Nov | 80 hours

Earth and Planetary Sciences

PACE in Earth and Planetary Sciences

GEOS348 | Mar - Jun | 50 hours

Advanced Geoscience III

GEOS388 | Aug - Nov | 70 hours

Physics and Astronomy

Frontiers of Astronomy and Astrophysics

ASTR310 | Aug - Nov | 90 hours

Professional Physics

PHYS311 | Aug - Nov | 105 hours

Statistics

Statistical Consulting

STAT399 | Aug - Nov | 35 hours

Biomolecular Sciences

Engaging the Community in Science

CBMS235 | Mar - Nov | 50 hours

Chemical Analysis II

CBMS308 | Mar - Jun | 45 hours

Mathematics

Participation and Community Engagement in Mathematics

MATH399 | Aug - Nov | 70 hours

Participation and Community Engagement in Science and Engineering

Science and Medical Sciences designated and open to all students of all degree programs

FOSC300 | Mar - Jun & Aug-Nov | 70 hours

Engineering

Industry Experience

ENGG400 | All sessions* | 420 hours

Computing

Business Information Systems Project

ISYS358 | Mar - Jun & Aug - Nov | 78 hours

Environmental Sciences

Environmental Management Project

ENVS363 | Aug - Nov | 76 hours

Integrated Climate Science

ENVS304 | Aug - Nov | 80 hours

Fluvial Geomorphology and River Management

ENVS339 | Mar - Jun | 50 hours

GIS for Urban & Regional Management

ENVS390 | Aug - Nov | 70 hours

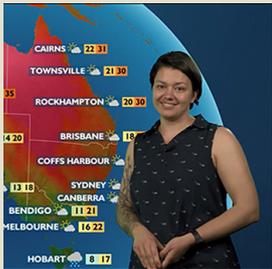
Chiropractic

Foundations of Clinical Practice

CHIR322 | Aug - Nov | 44 hours

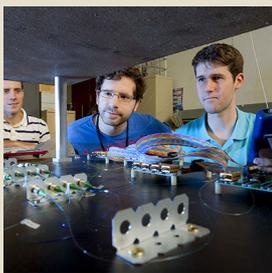


WHAT STUDENTS SAY ABOUT PACE IN SCIENCE AND ENGINEERING



"The PACE course allowed me to have first-hand experience in an office environment; the confidence I gained from Weatherzone helped me get out into my chosen field and successfully gain employment much more quickly than I had anticipated."

Pia O'Donnell, ENVS304 PACE student



"I feel I gained first hand experience, and learnt new skills that would not have been possible for me to learn without volunteering at Manly. I believe I have enhanced my skill set and made myself more employable."

Ben Buchan, FOSC300 PACE student

WHAT PARTNERS SAY ABOUT PACE IN SCIENCE AND ENGINEERING

"The outcome of the project exceeded my expectations. The students accomplished an impressive amount in the 12 sessions we worked together and were independent and motivated as well. I thought they brought very creative and mature ideas to the project."

**Dr Amanda Bauer, Astronomer and Outreach Officer
Australian Astronomical Observatory**

"Having a small team we don't often have the time to conduct in-depth statistical analysis so it's really valuable for us to have the interns explore the data in detail and come up with innovative ways of analysing it.."

**Ms Jane Shrapnel, Data Delivery and Insights Manager
Workplace Gender Equality Agency**

"Students were great, worked together well and presented the project back to me very well."

**Jason Poutawa Youth Foundation Coordinator
Salvation Army**

LOCAL, REGIONAL OR INTERNATIONAL ACTIVITIES

Faculty of Science and Engineering students have the opportunity to undertake their PACE activity in local, regional or international locations. The faculty PACE staff can assist students in securing a safe, suitable and supported activity. PACE International offers students opportunities that are focused either on professional industry experiences, or community-based collaborations in developing countries. Students may be eligible for a grant if their activity is located away from the Sydney region.

For more info visit goto.mq.edu.au/pace-international

PROFESSOR JUDYTH SACHS PACE PRIZES

Awarded annually, the Professor Judyth Sachs PACE Prizes recognise and reward students for outstanding achievement in a PACE unit. Faculty of Science and Engineering award winners over the years have been recognised for significant achievements such as the creation of a Surf Hazard Rating Digitisation System (SHRDS) that has benefited Surf Life Saving Australia and the wider community through automated, efficient, and accurate data that informs hazard decision-making.



ENVS339 Fluvial Geomorphology and River Management field trip.
Photographer: Kirstie Fryirs.



HOW CAN I LEARN MORE ABOUT BECOMING A PARTNER OF PACE?

If you're interested in learning more about PACE in the Faculty of Science and Engineering and you have a project or activity you would like to propose and develop we would love to hear from you.

To start the conversation please use the contact details below:

FIND OUT MORE

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