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.

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**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

**Environmental Sciences**
- Environmental Management Project
  - ENV383 | Aug - Nov | 76 hours
- Integrated Climate Science
  - ENV304 | Aug - Nov | 80 hours
- Fluvial Geomorphology and River Management
  - ENV339 | Mar - Jun | 50 hours
- GIS for Urban & Regional Management
  - ENV390 | Aug - Nov | 70 hours

**Engineering**
- Industry Experience
  - ENGG400 | All sessions* | 420 hours

**Computing**
- Business Information Systems Project
  - ISYS358 | Mar - Jun & Aug - Nov | 78 hours

**Chiropractic**
- Foundations of Clinical Practice
  - CHIR322 | Aug - Nov | 44 hours

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*Hours indicated represent the PACE activity (practical experience) within each Unit. *ENGG400 hours may be completed over 8 sessions.*
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.

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: