

## 2009 SCIENCES ENGAGEMENT FOR TEACHERS, STUDENTS AND PARENTS

*Welcome to the Future Link program offered by the Faculty of Sciences, University of Southern Queensland (USQ).*

Recently awarded a 2008 Peter Doherty Award in the Category of Science Education Partnerships from Education Queensland, the Faculty of Sciences continues to expand its award-winning program of activities aimed at helping potential students link up with the exciting and diverse future opportunities that exist in its disciplines of biomedical and physical sciences, mathematics, computing and statistics, nursing and psychology science, technology, engineering and mathematics. The Faculty is justifiably proud of its many successful graduates and appreciates their positive feedback on their USQ experience, particularly, the supportive staff.

The range of activities offered by the Faculty covers everything from career information through to opportunities to see agricultural science at work, from teams competing in the Science and Engineering Challenge through to senior students starting university early through the Head Start or the Accelerated Biomedical Science programs.

As well as activities for students, Future Link provides opportunities for teachers to partner with the Faculty to enhance their educational

experiences. This includes primary and middle school as well as senior school teachers and laboratory staff. The Faculty is keen to collaborate on activities to enrich the curriculum and learning activities. New initiatives are also looking at how parents can have a taste of future opportunities and university life.

As well as the activities listed on this pamphlet, the Faculty is interested in hearing from teachers, students and parents about other means by which it might partner in to further spread its message about the exciting futures linked to sciences. Please let us know.

The Faculty is committed to promoting the stunning opportunities arising from the skills shortage crisis across all of these the disciplines. To support this, the Faculty aims to provide future-focussed professional education for engagement, application and investigation. This includes opportunities for teachers to improve their discipline knowledge through the Graduate Certificate in Science, perhaps making use of USQ's world-renown flexible education options.

*"For tomorrow belongs to the people who prepare for it today"* (African proverb)





*Year 9 students in 2008 (i.e. going into Year 10 in 2009)*

## SIEMENS SCIENCE EXPERIENCE

**20-22 January 2009**

[www.scienceexperience.com](http://www.scienceexperience.com)

- 3 day program which allows students to experience activities in many different areas of science
- students are introduced to as many aspects of science, engineering and technology studies as possible, to encourage studies in upper secondary school years and at university
- hands-on experience allows students to see the various opportunities a career in science can offer

Cost \$105.00 – students can seek financial sponsorship from a Rotary Club.

*Thanks so much for all the effort you put in! It really was worth going to and I enjoyed it immensely! I will tell my younger friends about it for sure.*



*Years 8, 9 and 10 students*

## REGIONAL SCIENCE & ENGINEERING CHALLENGE

**12-15 May 2009**

- allows Years 8, 9 and 10 students to engage in a set of fun and competitive activities involving principles of science, engineering and technology
- provides students with a challenge and a selection of materials to complete the set task
- immediately engages students in activities with a minimum of introduction and theory
- allows students to explore scientific principles for themselves rather than being guided to a predetermined answer



*Science Teachers and Science Technicians*

## SECONDARY SCIENCE TEACHERS & SCIENCE TECHNICIANS PROFESSIONAL DEVELOPMENT DAY

**(date to be advised)**

Possible activities :

- sustainability – modelling of what if? scenarios
- a mouldy murder
- tour of laboratory facilities



*Year 11 and 12 students*

## PSYCHOLOGY STUDENT EXPERIENCE DAY

**(date to be advised)**

PROGRAM – Monday 18 August 2008

9.00 – 9.15 am	<b>Greeting and Introduction</b> (Associate Professor Tony Machin)	W418
9.15 – 10.00 am	<b>What is psychology and what do psychologists do?</b> (Dr Lorelle Burton)	W418
10.00 – 10.30 am	<b>Morning Tea</b> (students to bring/buy their own)	
10.30 – 11.15 am	<b>Clinical and Counselling Psychology</b> (Dr Paul Bramston & Mr Gavin Beccaria)	W418
11.15 – 12.00 noon	<b>Social psychology and real life</b> (Dr Nola Passmore)	W418
12.00 – 1.00 pm	<b>Lunch</b> (to be provided by the Faculty)	Venue to be advised
1.00 – 1.40 pm	<b>Sport psychology – How to be stronger and jump further</b> (Professor Peter Terry)	W418
1.40 – 2.15 pm	<b>Developmental Psychology</b> (Dr Majella Albion)	W418
2.15 – 2.30 pm	<b>Evaluation of the day and farewell</b> (Associate Professor Tony Machin)	W418



*Year 11 and 12 students*

## NURSING STUDENT EXPERIENCE DAY

**(date to be advised)**

PROGRAM – Friday 22 August 2008

9.00 – 9.30 am	<b>Welcome, Greeting and Introduction</b> (Head of Department of Nursing and Midwifery) Professor Cath Rogers-Clark	W414
<b>MINI INTERACTIVE TUTORIALS AND DISCUSSION</b>		
9.30 – 10.00 am	<b>What is Health</b> (Coralie Graham)	W414
10.00 – 10.30 am	<b>Looking at Age</b> (Wendy Lee Kyle)	W414
10.30 – 10.50 am	<b>Morning Tea</b> (students to bring/buy their own)	
10.50 – 11.45 am	<b>Attend a Nursing Lecture: Heart Matters – Cardiovascular Nursing</b> (Geoff Wilson)	W414
11.45 am – 12.30 pm	<b>What is it like to be a Nursing student?</b> Talk to students doing the Bachelor of Nursing and Lecturers	W414
12.30 – 1.00 pm	<b>Lunch</b> (to be provided by the Faculty)	W414
1.00 – 2.15 pm	<b>Workshop Session</b> Including: Practical nursing skills – hands-on opportunity to experience some clinical skills that students need to gain to go on clinical placements. (To meet health and safety regulations, students should wear or bring enclosed shoes for the laboratory sessions)	W Block 3rd floor Nursing Labs
2.15 pm	<b>Farewell</b>	



*Year 11 and 12 Secondary School Science Teachers*

## PRIMARY INDUSTRIES CENTRE FOR SCIENCE EDUCATION (PICSE) PROFESSIONAL DEVELOPMENT PROGRAM

**(date to be advised – possibly September/October)**

This program aims to provide Year 11 and 12 secondary school science teachers with first hand experience of the scientific operations of our local primary industries. Teachers will be provided with practical classroom resources relevant to physical and life sciences to incorporate into their teaching plan. This is an opportunity for teachers to connect with industry as well as gain an insight into the resources available from their local University.

2008 program highlights include: Climatology; Breeding Better Crops with Biotechnology Workshop; Food and Wine Chemistry; Pest Management (DPI), Entomology and Scientific Method Workshop; Genetics (Pacific Seeds).

*Parents, Students and Teachers*

## INSIGHT SCIENCE LECTURE

Two inspiring presentations on current science research happening in the real world. This initiative is sponsored by Southern Qld SCIPP and USQ. Refreshments will be provided.



## OTHER PROPOSED ENGAGEMENT ACTIVITIES

- Science Week
- Sciences Student Experience Day
- Science for Parents
- Primary Teachers' Professional Development Day
- Science & Technology Forum
- Mission Astronomy

**WHAT WOULD YOU LIKE TO SEE – ANY SUGGESTIONS?**



### Year 11 students

## PRIMARY INDUSTRIES CENTRE FOR SCIENCE EDUCATION (PICSE) CAMP

**2008 dates – 8-12 December (2009 dates to be advised)**

This experience allows students to gain a practical insight into the many exciting science opportunities relevant to primary industries.

Students will stay at one of USQ's residential colleges and will have the opportunity to collaborate with industry as well as experience the science labs and science activities as USQ.

Sponsored by a number of government departments and industry members, the camp is also a fantastic opportunity for the students to network.

Industry partners include : CSIRO, Department of Primary Industries and Fisheries, Department of Natural Resources and Water, Pacific Seeds, Monsanto, the Centre for Systems Biology, the Australian Centre for Sustainable Catchments, Education Queensland and the University of Tasmania.

In January of the next year, each student is placed with one of the industry partners to undertake five days of work experience and to appreciate science in 'a real world' situation.



### Year 11 students

## ACCELERATED BIOMEDICAL SCIENCE PROGRAM

**APPLICATIONS CLOSE 5 JUNE 2009**

[www.usq.edu.au/sciences/studyareas/biomed/acceleratedbiomed.htm](http://www.usq.edu.au/sciences/studyareas/biomed/acceleratedbiomed.htm)

- Aimed at highly achieving Year 11 students
- Provides a coordinated and rigorous, streamlined program that will lead to guaranteed enrolment in the Bachelor of Biomedical Science program at USQ
- Students complete their Bachelor of Biomedical Science program in two years instead of three, allowing faster entry into postgraduate degrees (or the workplace).
- Additional support will be provided to facilitate success in students' studies during Years 11 and 12 as well as during transition to University study.
- Students must have achieved at least a B grade in Biology, Chemistry and Mathematics B at the time of application.
- The program is available to participating schools. If you would like further information about becoming involved, please contact us.

### Looking at Your Future...

Did you know... that the Government is providing around \$63.6 million over four years to refund compulsory HELP repayments for eligible maths and science graduates who work in related occupations, including teaching these subjects in secondary schools?

The Government will refund 50 per cent of an eligible graduate's compulsory HECS-HELP repayments for five years.

Media Release: <http://mediacentre.dewr.gov.au/mediacentre/gillard/releases/HigherEducationRevolution>

#### USQ OFFERS:

Graduate Certificate in Science (4 units)  
[www.usq.edu.au/handbook/current/sci/GCSC.html](http://www.usq.edu.au/handbook/current/sci/GCSC.html)

Graduate Diploma in Mathematics (8 units)  
[www.usq.edu.au/handbook/current/sci/GDMA.html](http://www.usq.edu.au/handbook/current/sci/GDMA.html)

USQ Graphics (08-898)

### For more information

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