



Murrumba State Secondary College

Guidance and Careers Matters

Careers Information

This fortnight's edition of Guidance and Careers Matters includes information that was requested (early entry to university, engineering careers information) by a parent. Staff, parents and students are encouraged to request information about particular careers or other related matters through the college Guidance Officer. Email egood86@eq.edu.au or contact the college office.

Early Entry to University

Many of the local universities offer Year 11 and/or Year 12 students the opportunity to study a university subject while enrolled in Senior Schooling. There are many benefits of these programs including:

- Most university semester-long subjects count for 2 Queensland Certificate in Education points
- Students get to sample university courses prior to university entry
- Some universities offer a guaranteed place in some university degrees, based upon successful completion of university early entry subjects
- All universities listed below offer early entry courses without tuition fees, or fees that are heavily subsidised
- Some universities offer bonus ranks or OP points, whereby a point is added to their QTAC rank, or OP score for successful completion of a university subject
- Students may receive credit for later university course studies
- Courses are available across a variety of study modes including distance education, online or on campus

Application dates and methods vary but all require the consent of the college principal. Most universities require high levels of academic achievement for students to be considered for enrolment.

Some universities are working on and making alterations/additions to their early entry programs, so the information gathered here is subject to change. Checking with each university via their website will help you make sure you have the most up to date information. Brochures about these early entry courses are currently being put together by most universities and will be available soon via the college Guidance Officer.

UQ Enhanced Studies Program (ESP)

Subject areas include: accounting, chemistry, economics, history, mathematics, languages, law, music, philosophy, physics and political science. ESP subjects are exempt from tuition fees.

Students who successfully complete the Program will be eligible to receive one bonus point towards their University entrance rank through UQ's Bonus Rank Scheme. In addition, the majority of ESP students who later enrol in a relevant UQ degree may receive credit for their completed course.

Further information and application forms are available online at www.uq.edu.au/esp Applications open 1 August and close 31 October each year for Year 12 the following year. Applications are open for study during **Semester One Year 12 only.**

Start QUT

Subject areas include: Building and Planning, Business, Creative Design and Performance, Education, Engineering, Health and Community, Information Technology, Justice, Science and Mathematics. Start QUT subjects are exempt from tuition fees. Students may receive up to two bonus QTAC entry ranks, one for each START QUT unit successfully completed, added to your OP or rank through the Entry bonus scheme.

Further information and application forms are available at <http://www.qut.edu.au/study/high-school-programs/start-qut>

Applications are online and open for Semester one Year 12 around August of the previous year and around March for Semester Year 12 two the same year. Applications are open for study during **Semesters 1&2 Year 12 only**.

Guests Griffith

Subject areas include: Business and Government, Criminology and Law, Education, Engineering and Information Technology, Environment and Planning, Health, Humanities and Social Sciences, Music, Science and Aviation, Visual and Creative Arts.

Students who complete one Guests university course and achieve a Pass grade or better are eligible to receive a Guaranteed Offer of Entry to a wide range of undergraduate degree programs at Griffith University (some courses are exempt from this). GUESTS students receive one bonus admission rank towards other Griffith University degree program preferences when applying through the Queensland Tertiary Admissions Centre (QTAC) or the NSW Universities Admissions Centre (UAC).

Further information and application details can be found online at <http://www.griffith.edu.au/pathways/guests-program> Students may study over **Summer semester at the end of Year 11 or Semester 1 or 2 in Year 12**. Application dates vary according to the semester applied for – but often close months prior to the start of the semester. See the website for more details.

USC Headstart

Students can study from a choice of over 70 courses from the faculties of Arts and Business or Science, Health, Education and Engineering.

Fees are heavily subsidised. Students may gain guaranteed entry into most USC programs, if they successfully complete two courses within the Headstart program. Further information and application details can be found online at <http://www.usc.edu.au/study/courses-and-programs/headstart-program-year-11-and-12-students/how-to-apply> Students may study courses in **Year 11 or Year 12**. Key application dates are available at the website above.

USQ Headstart

Students can study subjects from Business and Commerce, Creative Arts and Media, Education, Engineering and Built Environment, Health and Community, Humanities and Communication, Information Technology, Law and Justice and Sciences. Students are guaranteed entry into a related USQ program upon successful completion of a Head Start course and offered a fee exemption (the first Head Start course is free of charge).

Further information is available from: <http://www.usq.edu.au/future-students/high-school-students/head-start> Students can study in **Year 11 or Year 12**. Application details and closing dates are available at the website above.

CQU SUN (Start Uni Now)

Students can study from a wide variety of subjects from areas including science, business, arts, engineering, education, health and music (see <http://www.cqu.edu.au/study/who-am-i/school-leaver/start-uni-now-sun/what-start-uni-now-sun-courses-can-i-study> for the full list). Fees are heavily subsidised.

Students can complete up to two university subjects over **Year 11 or Year 12**. There are also summer semester courses available. Further information and application dates can be found at <http://www.cqu.edu.au/study/who-am-i/school-leaver/start-uni-now-sun> Application forms are available online.

QUT Widening Participation Career Counselling

QUT offers free, impartial and confidential career information to people from the Moreton Bay region considering any sort of future study - either TAFE or University.

Make an appointment to see our qualified Careers Counsellors at two locations:

- QUT's Caboolture Campus or
- Career Kiosks in the Moreton Bay Regional Library, Caboolture each Wednesday

To make an appointment call 5316 7400 or email yourfuture@qut.edu.au

UQ FEAST

Students in Years 10-12 are invited to attend the FEAST residential camp being held at the UQ Gatton campus from 29 June - 3 July, 2014.

The exciting program includes a 5 day camp designed to inspire and inform high school students of the exciting careers available in Agriculture, Science & Technology.

For information, contact:

Erin Pearl Phone: (07) 54 601 229 Email: feast@uq.edu.au

Web: <http://www.science.uq.edu.au/feast>

Defence Force Work Experience Program

Students 15 years and over can apply for the Defence Force Work Experience Program which provides students with the opportunity to sample life in Defence and learn more about the Australian Defence Force and the Australian Public Service. Programs are available across Australia – locally at the Enoggera barracks, Amberley and Oakey and most run for up to a week. For more information see the Guidance Officer or go to

www.defence.gov.au/workexperience

Other Upcoming Events and Local Services

Let's Get Started Program

This is a 5 week program designed to help young people aged from 16-25 to get ready for the written test for a Learner's Permit. There may also be some financial help to get a Learner's Permit. The program starts on 26 Feb and runs for 3.00pm until 4.30pm on Wednesdays. The location is Deception Bay Youth Program – 6 Summer St Deception Bay. For more information contact Ross on 32040277. Numbers are limited so places will be allocated on a first come, first served basis.

Career in focus

Chemical and Metallurgical Engineer

According to www.myfuture.com.au:

What's it like to be a Chemical Engineer?

Chemical engineers design and coordinate the construction and operation of manufacturing facilities and processes that convert raw materials into everyday products such as petrol, toothpaste, pharmaceuticals and plastics.

Chemical engineers usually work standard hours, but may be called in to meet demanding deadlines. Those with responsibilities for continuous process plants may be on call 24 hours a day. Some may work shifts during the commissioning of new plants. Workplaces range from laboratories and processing plants to engineering design offices and research institutions.

There are different types of chemical engineers as well:

Chemical engineering integrates chemistry, biology, physics, and mathematics to design products and processes. Chemical and materials engineering students learn to select, process and develop materials and apply this knowledge to manufacturing processes. Chemical and metallurgical engineering involves the extraction and production of metals and minerals.

Duties and tasks of a Chemical Engineer:

- seek new and more efficient processes and materials, or improve or find new uses for existing materials
- design methods and equipment to control and contain the processes that transform basic materials into useful products

- ensure the safe, efficient and environmentally friendly operation of equipment and test products at various stages of production to check their quality
- make plans and specifications for new production plants, taking into account available technology, the cost and size of equipment and storage space, market requirements, transport methods and disposal of surplus substances
- review current methods of production for cost efficiency, environmental friendliness, maximum output and optimal product quality
- identify faults in the day-to-day operation of process plants (such as oil refining, steel making and water treatment) and take corrective action
- prepare reports, feasibility studies and cost analyses of processes
- provide product process information to sales and marketing personnel or customers
- direct and coordinate the work of maintenance and construction tradespeople or process plant operators.

Related Occupations

Agricultural Engineer; Chemist; Civil Engineer; Environmental Engineer; Industrial Engineer; Materials Engineer; Materials Scientist; Metallurgist; Patent Examiner; Petroleum Engineer; Mechanical Officer; Production or Plant Engineer

Courses/Qualifications

You will need to complete Year 12 and gain entry into one of the following courses (OP and Ranks for 2012 QLD courses are given; these are subject to change): www.qtac.edu.au

B Engineering James Cook University (Cairns or Townsville) 12/75

B Engineering/B Information Technology James Cook University (Cairns or Townsville) 12/75

B Engineering/B Science James Cook University (Cairns or Townsville) 12/75

B Engineering University of Queensland 6/90 (includes further specialisations)

B Engineering/B Technology University of Queensland 6/90 (includes further specialisations)

Current (10/02/2014) advice by UQ for students who don't meet OP requirements is that next closest alternative would be B Science (2012 OP cut off was 11) at UQ, as students can enrol in most of the first year engineering subjects, if they meet prerequisites.

It is also worth noting that the UQ Enhanced Studies Program currently includes 1 elective and 1 compulsory subject from the B Engineering (Chemical and Metallurgical or Chemical and Materials or Chemical single major) that you can study while in Semester 1 Year 12

School subjects that may relate to chemical engineering, or be helpful:

Maths B and C, Geography, **Chemistry, Physics, English**, Engineering Excellence, Technology Studies

(Please note English, Maths B and, for UQ, one of Chemistry or Physics are often pre-requisites and you can still study Engineering without studying some of the subjects listed above, **refer to QTAC pre-requisite guides** – which are coming later this year - for up to date information)

Information in this bulletin was gathered from a variety of sources including publicly available websites, institutional and organisational newsletters, student and career advisers and guidance officers. Every effort has been made to ensure the information provided is accurate and up-to-date at the time of publication. Check individual organisation websites for current information.