Bachelor of Engineering (Honours) (Petroleum, Civil and Structural) (BE(Hons)(PetrolCiv&amp;Struct))

2015

These Program Rules should be read in conjunction with the University's policies (http://www.adelaide.edu.au/policies).

Overview

Through this combined degree program students can combine the concepts of petroleum engineering with civil and structural engineering. The petroleum program integrates core petroleum engineering with geosciences and management and builds a strong foundation of mathematics, physics, geology, geophysics, computer applications and engineering principles. The civil and structural program will provide students with skills and knowledge in creating and maintaining the physical infrastructure of society while managing and conserving natural resources.

Students are also required to complete 12 weeks of approved practical experience during their study. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Petroleum, Civil and Structural) is an AQF Level 8 qualification with a standard full-time duration of 5 years.

Condition of Enrolment

Mathematics IM: Students who have not undertaken SACE Stage 2 Specialist Mathematics will be required to enrol in Mathematics IM, followed by Mathematics IA with Mathematics IB taken in Summer Semester to complete the Mathematics requirements at Level I. The satisfactory completion of Mathematics IM is in addition to the normal requirements of the Bachelor of Engineering (Honours).

1. Academic Program Rules for Bachelor of Engineering (Honours) (Petroleum, Civil and Structural)

There shall be a Bachelor of Engineering (Honours) (Petroleum, Civil and Structural).

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Petroleum, Civil and Structural), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units:

2.1.1 Core Courses

C&ENVENG 1008 Engineering Planning & Design IA  (3 units)
C&ENVENG 1009 Civil & Environmental Engineering IA  (3 units)
C&ENVENG 1010 Engineering Mechanics - Statics  (3 units)
C&ENVENG 2025 Strength of Materials IIA  (3 units)
C&ENVENG 2069 Geotechnical Engineering IIA  (3 units)
C&ENVENG 2071 Water Engineering IIA  (3 units)
C&ENVENG 2072 Structural Engineering Design  (3 units)
C&ENVENG 3001 Structural Mechanics IIIA  (3 units)
C&ENVENG 3005 Structural Design III (Concrete)  (3 units)
C&ENVENG 3007 Structural Design III (Steel)  (3 units)
C&ENVENG 3012 Geotechnical Engineering Design III  (3 units)
C&ENVENG 3077 Engineering Hydrology  (3 units)
C&ENVENG 3079 Water Engineering & Design III S2  (3 units)
C&ENVENG 4034 Engineering Management IV  (3 units)
C&ENVENG 4222 Research Project (Part B): Civil  (3 units)
C&ENVENG 4223 Research Project (Part C): Civil  (6 units)
COMP SCI 1201 Introduction to Programming for Engineers  (3 units)
MATHS 1011 Mathematics IA  (3 units)
MATHS 1012 Mathematics IB  (3 units)
MATHS 2201 Engineering Mathematics IIA  (3 units)
MATHS 2104 Numerical Methods II  (3 units)
PETROENG 1005 Introduction to Petroleum Geosciences & the Oil Industry  (3 units)
PETROENG 1006 Introduction to Petroleum Engineering  (3 units)
PETROENG 2005 Sedimentology & Stratigraphy  (3 units)
PETROENG 2009 Formation Evaluation, Petrophysics & Rock Properties  (3 units)
PETROENG 2010 Drilling Engineering  (3 units)
PETROENG 3019 Structural Geology & Seismic Methods  (3 units)
PETROENG 3020 Production Engineering  (3 units)
PETROENG 3025 Reservoir Engineering  (3 units)
PETROENG 3026 Formation Damage & Productivity Enhancement  (3 units)
PETROENG 4022 Integrated Field Development & Economics Project  (3 units)
PETROENG 4027 Decision Making & Risk Analysis  (3 units)
PETROENG 4034 Petroleum Business & Project Economics  (3 units)
PETROENG 4035 Reservoirs, Resources & Reserves (3 units)

PETROENG 4004A/B Petroleum Engineering Design Project Part 1 & 2 (6 units)

2.1.2 Electives

Courses to the value of 9 units, including Civil Engineering electives to the value of 3 units and Petroleum Engineering electives to the value of 6 units from the following:

Civil Engineering

C&ENVENG 3029 Environmental Modelling & Management (3 units)

C&ENVENG 4069 Advanced Reinforced Concrete (3 units)

C&ENVENG 4070 Seismic Design of Masonry Buildings (3 units)

C&ENVENG 4073 Water Distribution Systems & Design (3 units)

C&ENVENG 4075 Water Resources Optimisations & Modelling (3 units)

C&ENVENG 4077 Coastal Engineering & Design (3 units)

C&ENVENG 4085 Traffic Engineering & Design (3 units)

C&ENVENG 4092 Wastewater Engineering & Design (3 units)

C&ENVENG 4096 FRP Retrofitting of Concrete Structures (3 units)

C&ENVENG 4097 Analysis of Rivers & Sediment Transport (3 units)

C&ENVENG 4099 Structural Response to Blast Loading (3 units)

C&ENVENG 4106 Introduction to Geostatistics (3 units)

C&ENVENG 4107 Prestressed Concrete Structures (3 units)

C&ENVENG 4091 Waste Management Analysis & Design (3 units)

or

Alternatively, students may take Level II / III courses up to the value of 3 units offered by the School of Mathematical Sciences. In special circumstances other combinations of elective courses may be acceptable but must be approved by the Head of School. Students may also, with the approval of the Head of School, replace one or more elective courses with appropriate courses offered by other schools in the University.

Petroleum Engineering

PETROENG 3001 Reservoir Simulation (3 units)

PETROENG 3005 Reservoir Characterisation & Modelling (3 units)

PETROENG 3007 Well Testing & Pressure Transient Analysis (3 units)

PETROENG 3023 Well Completion & Simulation (3 units)
PETROENG 4037 Unconventional Resources & Recovery (3 units)

PETROENG 4033 Integrated Reservoir & Project Management (3 units)

Engineering Communication

ENG 3003 Engineering Communication EAL^ (3 units)

^Unless exempted by the Faculty, all international students are required to take this course and the Faculty will advise which course is to be replaced by ENG 3003 Engineering Communication EAL.

2.1.3 Extra Course Requirement

Students who have not taken SACE Stage 2 Specialist Mathematics (or equivalent) will be required to enrol in Mathematics IM, followed by Mathematics IA with Mathematics IB to complete the Mathematics requirements at Level I. The satisfactory completion of Mathematics IM is in addition to the 120 units for the Bachelor of Engineering (Honours) (Petroleum, Civil and Structural):

MATHS 1013 Mathematics IM (3 units)

2.1.4 Work Based Training / Extra Mural Studies

Students must complete a total of 12 weeks practical experience, approved by the Faculty and of which a minimum 6 weeks should be under the supervision of a professional engineer.

2.1.5 Repeating Courses

A student who has failed a course twice may not enrol in that course again except by special permission of the Faculty and then only under such conditions as the Faculty may prescribe.

For all current Academic Programs Rules, visit:

The University of Adelaide Calendar website

For information about Programs and Courses, contact Ask Adelaide:

Telephone: +61 8 8313 5208

Freecall: 1800 061 459

Online enquiries: adelaide.edu.au/student/enquiries

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