



THE UNIVERSITY
of ADELAIDE

Undergraduate and Postgraduate

2015 Calendar

Faculty of Engineering,
Computer & Mathematical
Sciences

The University of Adelaide

Undergraduate and postgraduate calendar

ISSN 0810-0349

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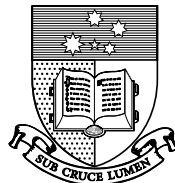
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Graduate Attributes

The University of Adelaide

The University of Adelaide is a research-intensive university that seeks to develop graduates of international distinction by providing high quality education. The University defines the philosophy underpinning its teaching programs through the Graduate Attributes. These describe the qualities, knowledge and capabilities that students are encouraged to take responsibility for developing throughout their studies at the University. The Graduate Attributes are not a list of skills to be mastered; rather, they encapsulate for both students and the wider community the defining characteristics of a student's university degree program(s), and describe a set of characteristics that are designed to be transferable beyond the particular disciplinary context in which they have been developed. While Graduate Attributes are fostered in the context of the curriculum, they are also developed within the total university experience as they encourage students to reflect on the broader purpose of their university education.

The University of Adelaide Graduate Attributes are:

1. Deep discipline knowledge
2. Critical thinking and problem solving
3. Teamwork and communication skills
4. Career and leadership readiness
5. Intercultural and ethical competency
6. Self-awareness and emotional intelligence.

The Arms of the University

The heraldic description of the Coat of Arms is as follows:

Per pale Or and Argent an Open Book proper edged Gold on a Chief Azure five Mullets, one of eight, two of seven, one of six and one of five points of the second, representing the Constellation of the Southern Cross; and the Motto associated with the Arms is

Sub Cruce Lumen

'The light (of learning) under the (Southern) Cross'

Student Study Commitment for Coursework Students

To successfully complete courses, students will need to allocate an appropriate time commitment to their study. In addition to the formal contact—the time required for each course (e.g. lectures, tutorials, practicals)—students will need to allocate non-contact time. Non-contact time will be required for a range of activities which may include, but are not limited to, assessment tasks, reading, researching, note-taking, revision, writing, consultation with staff, and informal discussion with other students. While the relative proportion of contact and non-contact time may vary from course to course, as a guide, a full-time student would expect to spend, on average, a total of 48 hours per week on their studies during teaching periods. The workload for undergraduate and postgraduate coursework programs is 24 units per year (full-time).

Faculty of Engineering, Computer & Mathematical Sciences

2015 Undergraduate and Postgraduate Program Rules

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Notes on Delegated Authority

1. Council has delegated the power to approve minor changes to the Academic Program Rules to the Executive Deans of Faculties.
2. Council has delegated the power to specify syllabuses to the Head of each school or centre concerned, such syllabuses to be subject to approval by the Faculty or by the Executive Dean on behalf of the Faculty.

Undergraduate Program Rules

Bachelor of Computer Science (BCompSc)

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

Overview

The Bachelor of Computer Science caters for people with specific interests in computer science and / or information technology. It has a core of compulsory computer science courses and a wide range of elective courses including mathematics and statistics as well as commerce, economics, engineering, finance, arts, and sciences. Graduates should be highly skilled in the design of computer-based solutions to the problems of information management and processing in industry, commerce, science, entertainment, and the public sector.

The Bachelor of Computer Science is an AQF Level 7 qualification with a standard full-time duration of 3 years.

1. Academic Program Rules for Bachelor of Computer Science

There shall be a Bachelor of Computer Science.

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Computer Science, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 72 units including:

- at least 24 units of Level I courses
- at least 18 units of Level II courses, of which at least 12 units must comprise Level II Computer Science courses
- at least 24 units of Level III courses, of which at least 18 units must comprise Level III Computer Science courses.

2.1.1 Core Courses

COMP SCI 1102 Object Oriented Programming	3
COMP SCI 1103 Algorithm Design & Data Structures	3
COMP SCI 2000 Computer Systems	3
COMP SCI 2201 Algorithm & Data Structure Analysis	3
MATHS 3015 Communication Skills III	3
COMP SCI 3006 Software Engineering & Project	3

and

Courses to the value of at least 3 units from the following:

COMP SCI 1105 Web & Database Computing	3
COMP SCI 1010 Puzzle Based Learning	3
COMP SCI 1012 Scientific Computing	3

and

Courses to the value of at least 3 units from the following:

MATHS 1008 Mathematics for Information Technology I	3
MATHS 1012 Mathematics IB	3

2.1.2 Electives

Courses to the value of 48 units satisfying the requirements of Academic Program Rule 2.1:

COMP SCI 1105 Web & Database Computing	3
COMP SCI 1010 Puzzle Based Learning	3
COMP SCI 1012 Scientific Computing	3
COMP SCI 1101 Introduction to Programming	3
COMP SCI 2005 Systems Programming	3
COMP SCI 2006 Introduction to Software Engineering	3
COMP SCI 2203 Problem Solving & Software Development	3
COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
COMP SCI 3007 Artificial Intelligence	3
COMP SCI 3009 Advanced Programming Paradigms	3
COMP SCI 3012 Distributed Systems	3
COMP SCI 3013 Event Driven Computing	3
COMP SCI 3014 Computer Graphics	3
COMP SCI 3016 Computational Cognitive Science	3
COMP SCI 3301 Advanced Algorithms	3
COMP SCI 3302 Information Security Professional Practice	3

or

other undergraduate courses offered by the University.

2.1.3 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.

Bachelor of Computer Science (Honours) (BCompSc(Hons))

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

Overview

The Bachelor of Computer Science (Honours) is available to high performing students in a one year program of additional study taken after the completion of the Bachelor of Computer Science. Providing a deeper understanding of the chosen specialisation, Honours demonstrates a commitment to further learning and is suitable preparation for students who wish to proceed to postgraduate studies. The degree produces highly skilled, adaptable graduates who are able to design computer-based solutions to the problems of information management and processing in industry, commerce, science, entertainment, and the public sector and continue further research.

The Bachelor of Computer Science (Honours) is an AQF Level 8 qualification with a standard full-time duration of 1 year.

1 Academic Program Rules for Bachelor of Computer Science (Honours)

There shall be a Bachelor of Computer Science (Honours).

2 Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Computer Science (Honours) the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 24 units:

2.1.1 Core Courses

APP MTH 4011A/B Honours Applied Mathematics and Computer Science	24
COMP SCI 4999A/B Honours Computer Science.....	24
PURE MTH 4004A/B Honours Computer Science & Pure Mathematics	24
STATS 4003A/B Honours Statistics & Computer Science	24

2.1.2 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.

Bachelor of Computer Science (Advanced) (BCompSc(Adv))

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

Overview

The Bachelor of Computer Science (Advanced) is designed for high achieving students seeking more self-directed challenges and greater insights into current research and grand challenges in the field of computer science / information technology. Graduates should be highly skilled in the design of computer-based solutions to the problems of information management and processing in industry, commerce, science, entertainment and the public sector. In addition, graduates should also have a deeper understanding of contemporary issues in computer science, extensive exposure to self-directed learning and will have taken part in a wide-ranging program of individual and group projects.

Students enrolled in this program must maintain a GPA of 5.0 or will be required to transfer to the Bachelor of Computer Science.

The Bachelor of Computer Science (Advanced) is an AQF Level 7 qualification with a standard full-time duration of 3 years.

1. Academic Program Rules for Bachelor of Computer Science (Advanced)

There shall be a Bachelor of Computer Science (Advanced).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Computer Science (Advanced), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 72 units including:

- at least 24 units of Level I courses
- at least 18 units of Level II courses, of which at least 12 units must comprise Level II Computer Science courses
- at least 24 units of Level III courses, of which at least 18 units must comprise Level III Computer Science courses.

2.1.1 Core Courses

COMP SCI 1102 Object Oriented Programming	3
COMP SCI 1103 Algorithm Design & Data Structures	3

COMP SCI 1104 Grand Challenges in Computer Science	3
COMP SCI 2000 Computer Systems	3
COMP SCI 2201 Algorithm & Data Structure Analysis	3
COMP SCI 2008 Topics in Computer Science.....	6
COMP SCI 3006 Software Engineering & Project	3
COMP SCI 3020 Advanced Topics in Computer Science	6
MATHS 3015 Communication Skills III	3

and
Courses to the value of at least 3 units from the following:

MATHS 1008 Mathematics for Information Technology I	3
MATHS 1012 Mathematics IB.....	3

plus

Courses to the value of at least 3 units from the following:

COMP SCI 1105 Web & Database Computing	3
COMP SCI 1010 Puzzle Based Learning	3
COMP SCI 1012 Scientific Computing	3

2.1.2 Electives

Courses to the value of 33 units satisfying the requirements of Academic Program Rule 2.1.

COMP SCI 1105 Web & Database Computing	3
COMP SCI 1010 Puzzle Based Learning	3
COMP SCI 1012 Scientific Computing	3
COMP SCI 1101 Introduction to Programming	3
COMP SCI 2005 Systems Programming	3
COMP SCI 2006 Introduction to Software Engineering	3
COMP SCI 2203 Problem Solving & Software Development	3
COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
COMP SCI 3007 Artificial Intelligence.....	3
COMP SCI 3009 Advanced Programming Paradigms	3
COMP SCI 3012 Distributed Systems	3
COMP SCI 3013 Event Driven Computing.....	3

COMP SCI 3014 Computer Graphics.....	3
COMP SCI 3016 Computational Cognitive Science.....	3
COMP SCI 3301 Advanced Algorithms	3
COMP SCI 3302 Information Security Professional Practice	3
or other undergraduate courses offered by the University.	

2.1.3 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.

Bachelor of Engineering (Honours) - Flexible Entry

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

Overview

The Flexible Entry pathway to the Bachelor of Engineering (Honours) degrees provides students with an introduction to the engineering profession through exposure to the various engineering disciplines taught within the Faculty. This pathway provides a generic program of study in which students enrol into common introductory engineering courses. In the second half students enrol in two common introductory engineering courses and two electives, according to their preferred discipline of specialisation.

The Bachelor of Engineering (Honours) - Flexible Entry pathway has a standard full-time duration of 1 year. It is compulsory that students transfer to a named Bachelor of Engineering (Honours) degree on completion of the program of study of 24 units.

1. Academic Program Rules for Bachelor of Engineering (Honours) - Flexible Entry

There shall be a Bachelor of Engineering (Honours) - Flexible Entry.

2. Qualification requirements

2.1 Academic Program

The Bachelor of Engineering (Honours) - Flexible Entry pathway is not an award from which students can graduate. Students must transfer into one of the named Bachelor of Engineering (Honours) single, double or combined degrees at the completion of courses to the value of 24 units in the Bachelor of Engineering (Honours) - Flexible Entry pathway.

2.1.1 Core courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
ELEC ENG 1009 Electrical and Electronic Engineering IA.....	3
ENG 1000 Introduction to Engineering.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3

2.1.2 Electives

Courses to the value of 6 units from one of the following sets:

2.1.2.1 *Civil and Structural Engineering, Civil and Environmental Engineering, Civil, Structural and Environmental Engineering*

C&ENVENG 1009 Civil and Environmental Engineering IA.....	3
C&ENVENG 1012 Engineering, Modelling and Analysis IA	3

2.1.2.2 *Electrical and Electronic Engineering, Computer Systems Engineering, Telecommunications Engineering, Electrical and Sustainable Energy Engineering*

COMP SCI 1201 Introduction to Programming for Engineers	3
ELEC ENG 1010 Electrical and Electronic Engineering IB.....	3

2.1.2.3 *Mechanical Engineering, Mechatronic Engineering, Mechanical and Aerospace Engineering, Mechanical and Sports Engineering, Mechanical and Sustainable Energy Engineering*

MECH ENG 1006 Design Graphics and Communication	3
CHEM ENG 1009 Materials I.....	3

2.1.2.4 *Mining Engineering*

MINING 1011 Introduction to Mining Engineering IA.....	3
C&ENVENG 1012 Engineering, Modelling and Analysis IA	3

2.1.2.5 *Architectural Engineering*

DESST 1507 Construction I.....	3
DESST 1508 Environment I	3

2.1.2.6 *Chemical Engineering, Pharmaceutical Engineering*

CHEM 1200 Chemistry IB.....	3
CHEM ENG 1009 Materials I.....	3

2.1.2.7 *Software Engineering*

COMP SCI 1102 Object Oriented Programming	3
ELEC ENG 1010 Electrical and Electronic Engineering IB.....	3

2.1.2.8 *Petroleum Engineering, Petroleum, Civil and Structural Engineering, Petroleum and Mining Engineering, Petroleum and Chemical Engineering, Petroleum and Mechanical Engineering*

COMP SCI 1201 Introduction to Programming for Engineers	3
PETROENG 1006 Introduction to Petroleum Engineering	3

2.1.3 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.

2.2 Transferring to Bachelor of Engineering (Honours) award

At the completion of the 24 units of study students will be transferred to the Bachelor of Engineering (Honours) named degree of their choice.

Students completing courses in accord with Academic Program Rules 2.1.2.1 – 2.1.2.4 and transferring to the related Bachelor of Engineering (Honours) single named degree will be granted academic credit to the value of 24 units. Students completing courses in accord with Academic Program Rule 2.1.2.5 will be granted 18 units of credit.

Students completing courses in accord with Academic Program Rule 2.1.2.6 will be granted 12 units of credit.

Students completing courses in accord with Academic Program Rule 2.1.2.7 will be granted 15 units of credit.

Students completing courses in accord with Academic Program Rule 2.1.2.8 will be granted 21 units of credit.

Students completing all other course combinations will be granted a minimum of 12 units of credit.

Students will be advised by the Faculty regarding credit available for transfer into unrelated Bachelor of Engineering (Honours) named degrees. The minimum amount of credit will be 12 units.

Bachelor of Engineering (Honours) (Chemical) (BE(Hons)(Chem))

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

Overview

This program will provide students with a background in the physical sciences, chemical engineering core disciplines, integrated design skills and research training. The first two years of the program are spent developing an understanding of the foundation courses of chemical engineering, which are increasingly put into practice in the third and fourth years via major design, research and experimental projects. The program offers specialisations in Chemical, Minerals Processing and Sustainable Energy.

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 and the Institute of Chemical Engineers (IChemE) (UK).

The Bachelor of Engineering (Honours) (Chemical) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Chemical)

There shall be a Bachelor of Engineering (Honours) (Chemical).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Chemical), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units. Students also have the option of undertaking a major in Minerals Processing or Sustainable Energy.

2.1.1 Core Courses

CHEM ENG 1007 Introduction to Process Engineering	3
CHEM ENG 1011 Introduction to Process Modelling	3
CHEM ENG 1010 Professional Practice I	3
CHEM ENG 2010 Principles of Process Engineering	3
CHEM ENG 2011 Process Engineering Thermodynamics	3
CHEM ENG 2014 Process Heat Transfer	3

CHEM ENG 2016 Professional Practice II	3
CHEM ENG 2018 Process Fluid Mechanics	3
CHEM ENG 3036 Unit Operations Laboratory	3
CHEM ENG 3024 Professional Practice III	3
CHEM ENG 3029 Material Science & Engineering	3
CHEM ENG 3030 Simulation & Concept Design	3
CHEM ENG 3031 Process Control & Instrumentation	3
CHEM ENG 3033 Separation Processes	3
CHEM ENG 3034 Kinetics & Reactor Design	3
CHEM ENG 3035 Multi-phase Fluid & Particle Mechanics	3
CHEM ENG 4014 Plant Design Project	6
CHEM ENG 4034 Professional Practice IV	3
CHEM ENG 4056 Research Practice	3
MATHS 1011 Mathematics IA	3
MATHS 1012 Mathematics IB	3
MATHS 2201 Engineering Mathematics IIA	3
plus	
CHEM 1100 Chemistry IA	3
and	
CHEM 1200 Chemistry IB	3
or	
CHEM 1101 Foundations of Chemistry IA	3
and	
CHEM 1201 Foundations of Chemistry IB	3
plus	
CHEM ENG 4054 Research Project	3
or	
CHEM ENG 4055 Advanced Unit Operations Laboratory	3
Chemical Engineering without a major	
CHEM ENG 2013 Advanced Process Modelling	3
CHEM ENG 4050 Advanced Chemical Engineering	3
CHEM 2530 Environmental & Analytical Chemistry II	3
plus	
Courses to the value of 3 units from the following:	
BIOLOGY 1101 Biology 1: Molecules, Genes and Cells	3

GEOLOGY 1103 Earth Systems I	3
GEOLOGY 1104 Geology for Engineers I	3

Minerals Processing Major

CHEM ENG 2019 Introduction to Minerals Processing	3
CHEM ENG 4050 Advanced Chemical Engineering.....	3
CHEM ENG 4058 Hydrometallurgy & Electrometallurgy.....	3
CHEM ENG 4059 Pyrometallurgy	3
GEOLOGY 1104 Geology for Engineers I	3
CHEM 2530 Environmental & Analytical Chemistry II	3

Sustainable Energy Major

CHEM ENG 2013 Advanced Process Modelling	3
CHEM ENG 4048 Bio-fuels, Biomass & Wastes	3
CHEM ENG 4053 Pinch Analysis & Process Synthesis.....	3
MECH ENG 3105 Sustainability & the Environment.....	3
TECHCOMM 3006 Energy Management, Economics & Policy.....	3

plus

Courses to the value of 3 units from the following:

GEOLOGY 1103 Earth Systems I	3
GEOLOGY 1104 Geology for Engineers I	3

2.1.2 Electives

Students undertaking Chemical Engineering without a major must complete courses to the value of 6 units from the following:

CHEM ENG 4046 Combustion Processes	3
CHEM ENG 4048 Bio-Fuels, Biomass & Wastes	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3
CHEM ENG 4053 Pinch Analysis & Process Synthesis.....	3
CHEM ENG 4058 Hydrometallurgy & Electrometallurgy.....	3
CHEM ENG 4059 Pyrometallurgy	3
ENG 3003 Engineering Communication EAL ^	3

^ 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 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Chemical) / Bachelor of Arts (BE(Hons)(Chem) BA)

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 chemical engineering with arts. The chemical engineering program will provide students with a background in the physical sciences, chemical engineering core disciplines, integrated design skills and research training. In the arts program, students are able to specialise in areas of their choice by taking a 'major' (from one of 25 areas) and potentially a 'minor' (from a range of areas).

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 and the Institute of Chemical Engineers (IChemE) (UK).

The Bachelor of Engineering (Honours) (Chemical) / Bachelor of Arts 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) (Chemical) / Bachelor of Arts

There shall be a Bachelor of Engineering (Honours) (Chemical) / Bachelor of Arts.

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Chemical) / Bachelor of Arts, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 90 units from the Bachelor of Engineering (Honours) (Chemical);

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

CHEM ENG 1007 Introduction to Process Engineering	3
CHEM ENG 1011 Introduction to Process Modelling	3
CHEM ENG 1010 Professional Practice I	3
CHEM ENG 2010 Principles of Process Engineering	3
CHEM ENG 2011 Process Engineering Thermodynamics	3
CHEM ENG 2013 Advanced Process Modelling	3
CHEM ENG 2014 Process Heat Transfer	3
CHEM ENG 2016 Professional Practice II	3
CHEM ENG 2018 Process Fluid Mechanics	3
CHEM ENG 3036 Unit Operations Laboratory	3
CHEM ENG 3024 Professional Practice III	3
CHEM ENG 3029 Material Science & Engineering	3
CHEM ENG 3030 Simulation & Concept Design	3
CHEM ENG 3031 Process Control & Instrumentation	3
CHEM ENG 3033 Separation Processes	3
CHEM ENG 3034 Kinetics & Reactor Design	3
CHEM ENG 3035 Multi-phase Fluid & Particle Mechanics.....	3
CHEM ENG 4014 Plant Design Project.....	6
CHEM ENG 4034 Professional Practice IV.....	3
CHEM ENG 4050 Advanced Chemical Engineering.....	3
CHEM ENG 4054 Research Project	3
or	
CHEM ENG 4055 Advanced Unit Operations Laboratory.....	3
CHEM ENG 4056 Research Practice.....	3
MATHS 1011 Mathematics IA.....	3

MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA ...	3
plus	
CHEM 1100 Chemistry IA.....	3
and	
CHEM 1200 Chemistry IB.....	3
or	
CHEM 1101 Foundations of Chemistry IA.....	3
and	
CHEM 1201 Foundations of Chemistry IB.....	3
plus	
Courses to the value of 3 units from the following:	
BIOLOGY 1101 Biology 1: Molecules, Genes and Cells.....	3
GEOLOGY 1103 Earth Systems I.....	3
GEOLOGY 1104 Geology for Engineers I.....	3

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

CHEM ENG 4046 Combustion Processes.....	3
CHEM ENG 4048 Bio-Fuels, Biomass & Wastes.....	3
CHEM ENG 4053 Pinch Analysis & Process Synthesis.....	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3
CHEM ENG 4058 Hydrometallurgy & Electrometallurgy.....	3
CHEM ENG 4059 Pyrometallurgy.....	3
ENG 3003 Engineering Communication EAL ^.....	3

^ 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 Bachelor of Arts Requirements

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements. Consult the Academic Program Rules for the degree of Bachelor of Arts.

2.1.4 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 taken 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) / Bachelor of Arts: MATHS 1013 Mathematics IM..... 3

2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Chemical) / Bachelor of Finance (BE(Hons)(Chem) BFin)

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

Overview

Through this double degree program students can combine the concepts of chemical engineering with finance. The chemical engineering program will provide students with a background in the physical sciences, chemical engineering core disciplines, integrated design skills and research training. The finance program introduces students to the global and institutional aspects of our financial systems. 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 and the Institute of Chemical Engineers (IChemE) (UK).

The Bachelor of Engineering (Honours) (Chemical) / Bachelor of Finance 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) (Chemical) / Bachelor of Finance

There shall be a Bachelor of Engineering (Honours) (Chemical) / Bachelor of Finance.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Chemical) / Bachelor of Finance, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 84 units from the Bachelor of Engineering (Honours) (Chemical);

Courses to the value of 36 units from the Bachelor of Finance.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

CHEM ENG 1007 Introduction to Process Engineering	3
CHEM ENG1011 Introduction to Process Modelling	3
CHEM ENG 1010 Professional Practice I	3
CHEM ENG 2010 Principles of Process Engineering	3
CHEM ENG 2011 Process Engineering Thermodynamics	3
CHEM ENG 2014 Process Heat Transfer	3
CHEM ENG 2016 Professional Practice II	3
CHEM ENG 2018 Process Fluid Mechanics	3
CHEM ENG 3036 Unit Operations Laboratory	3
CHEM ENG 3024 Professional Practice III	3
CHEM ENG 3029 Material Science & Engineering	3
CHEM ENG 3030 Simulation & Concept Design	3
CHEM ENG 3031 Process Control & Instrumentation	3
CHEM ENG 3033 Separation Processes	3
CHEM ENG 3034 Kinetics & Reactor Design	3
CHEM ENG 3035 Multi-phase Fluid & Particle Mechanics.....	3
CHEM ENG 4014 Plant Design Project.....	6
CHEM ENG 4034 Professional Practice IV.....	3
CHEM ENG 4056 Research Practice.....	3
CHEM ENG 4050 Advanced Chemical Engineering	3
CHEM ENG 4054 Research Project	3
or	
CHEM ENG 4055 Advanced Unit Operations Laboratory	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3

plus

CHEM 1100 Chemistry IA.....	3
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and

CHEM 1200 Chemistry IB.....	3
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or

CHEM 1101 Foundations of Chemistry IA.....	3
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and

CHEM 1201 Foundations of Chemistry IB.....	3
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2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

CHEM ENG 4046 Combustion Processes.....	3
CHEM ENG 4048 Bio-Fuels, Biomass & Wastes	3
CHEM ENG 4053 Pinch Analysis & Process Synthesis.....	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3
CHEM ENG 4058 Hydrometallurgy & Electrometallurgy.....	3
CHEM ENG 4059 Pyrometallurgy	3
ENG 3003 Engineering Communication EAL ^	3

^ 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 Bachelor of Finance Courses

ACCTING 1002 Accounting for Decision Makers I	3
CORPFIN 2500 Business Finance II	3
CORPFIN 2501 Financial Institutions Management II.....	3
CORPFIN 3501 Portfolio Theory & Management III.....	3
ECON 1000 Principles of Macroeconomics I.....	3
ECON 1004 Principles of Microeconomics I.....	3
ECON 1009 International Financial Institutions & Markets I.....	3
ECON 2504 Intermediate Econometrics II.....	3

Courses to the value of 3 units from the following:

CORPFIN 2502 Business Valuation II.....	3
ECON 2508 Financial Economics II.....	3

plus

Courses to the value of 3 units from the following:

CORPFIN 3502 Options, Futures & Risk Management III.....	3
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MATHS 3012 Financial Modelling: Tools & Techniques III	3
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plus

Level III Finance courses to the value of 6 units.

2.1.4 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) / Bachelor of Finance:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Chemical) / Bachelor of Mathematical and Computer Sciences (BE(Hons)(Chem) BMaCompSc)

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

Overview

Through this double degree program students can combine the concepts of chemical engineering with mathematical and computer sciences. The chemical engineering program will provide students with a background in the physical sciences, chemical engineering core disciplines, integrated design skills and research training. The mathematical and computer sciences program includes a range of mathematics, statistics and computer science courses.

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 and the Institute of Chemical Engineers (IChemE) (UK).

The Bachelor of Engineering (Honours) (Chemical) / Bachelor of Mathematical and Computer Sciences 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) (Chemical) / Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Engineering (Honours) (Chemical) / Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Chemical) / Bachelor of Mathematical and Computer Sciences, with either a Computer Science

or Mathematics major, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 96 units from the Bachelor of Engineering (Honours) (Chemical);

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences.

2.1.1 Computer Science Major

Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
CHEM ENG 1007 Introduction to Process Engineering	3
CHEM ENG 1010 Professional Practice I	3
CHEM ENG 2010 Principles of Process Engineering	3
CHEM ENG 2011 Process Engineering Thermodynamics	3
CHEM ENG 2013 Advanced Process Modelling	3
CHEM ENG 2014 Process Heat Transfer	3
CHEM ENG 2016 Professional Practice II	3
CHEM ENG 2018 Process Fluid Mechanics	3
CHEM ENG 3036 Unit Operations Laboratory	3
CHEM ENG 3024 Professional Practice III	3
CHEM ENG 3029 Material Science & Engineering	3
CHEM ENG 3030 Simulation & Concept Design	3
CHEM ENG 3031 Process Control & Instrumentation	3
CHEM ENG 3033 Separation Processes	3
CHEM ENG 3034 Kinetics & Reactor Design	3
CHEM ENG 3035 Multi-phase Fluid & Particle Mechanics.....	3
CHEM ENG 4014 Plant Design Project.....	6
CHEM ENG 4034 Professional Practice IV.....	3
CHEM ENG 4054 Research Project	3

or

CHEM ENG 4055 Advanced Unit Operations Laboratory.....	3
CHEM ENG 4056 Research Practice.....	3
CHEM ENG 4050 Advanced Chemical Engineering.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
plus	
CHEM 1100 Chemistry IA.....	3
and	
CHEM 1200 Chemistry IB.....	3
or	
CHEM 1101 Foundations of Chemistry IA.....	3
and	
CHEM 1201 Foundations of Chemistry IB.....	3
and	
CHEM 2530 Environmental & Analytical Chemistry II.....	3

Bachelor of Engineering (Honours) - Electives

Courses to the value of 6 units from the following:

CHEM ENG 4046 Combustion Processes.....	3
CHEM ENG 4048 Bio-Fuels, Biomass & Wastes.....	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3
CHEM ENG 4053 Pinch Analysis & Process Synthesis.....	3
CHEM ENG 4058 Hydrometallurgy & Electrometallurgy.....	3
CHEM ENG 4059 Pyrometallurgy.....	3
ENG 3003 Engineering Communication EAL ^.....	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major in Computer Science.

2.1.2 Mathematics Major

Bachelor of Engineering (Honours) - Core Courses

CHEM ENG 1007 Introduction to Process Engineering.....	3
CHEM ENG 1011 Introduction to Process Modelling.....	3
CHEM ENG 1010 Professional Practice I.....	3

CHEM ENG 2010 Principles of Process Engineering.....	3
CHEM ENG 2011 Process Engineering Thermodynamics.....	3
CHEM ENG 2014 Process Heat Transfer.....	3
CHEM ENG 2016 Professional Practice II.....	3
CHEM ENG 2018 Process Fluid Mechanics.....	3
CHEM ENG 3036 Unit Operations Laboratory.....	3
CHEM ENG 3024 Professional Practice III.....	3
CHEM ENG 3029 Material Science & Engineering.....	3
CHEM ENG 3030 Simulation & Concept Design.....	3
CHEM ENG 3031 Process Control & Instrumentation.....	3
CHEM ENG 3033 Separation Processes.....	3
CHEM ENG 3034 Kinetics & Reactor Design.....	3
CHEM ENG 3035 Multi-phase Fluid & Particle Mechanics.....	3
CHEM ENG 4014 Plant Design Project.....	6
CHEM ENG 4034 Professional Practice IV.....	3
CHEM ENG 4054 Research Project.....	3
or	
CHEM ENG 4055 Advanced Unit Operations Laboratory.....	3
CHEM ENG 4050 Advanced Chemical Engineering.....	3
CHEM ENG 4056 Research Practice.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
plus	
CHEM 1100 Chemistry IA.....	3
and	
CHEM 1200 Chemistry IB.....	3
or	
CHEM 1101 Foundations of Chemistry IA.....	3
and	
CHEM 1201 Foundations of Chemistry IB.....	3
and	
CHEM 2530 Environmental & Analytical Chemistry II.....	3

Courses to the value of 3 units from the following:

BIOLOGY 1101 Biology 1: Molecules, Genes and Cells.....	3
GEOLOGY 1103 Earth Systems I.....	3
GEOLOGY 1104 Geology for Engineers I.....	3

Bachelor of Engineering (Honours) - Electives

Courses to the value of 6 units from the following:

CHEM ENG 4046 Combustion Processes	3
CHEM ENG 4048 Bio-Fuels, Biomass & Wastes	3
CHEM ENG 4051 Water & Wastewater Engineering	3
CHEM ENG 4053 Pinch Analysis & Process Synthesis	3
CHEM ENG 4058 Hydrometallurgy & Electrometallurgy	3
CHEM ENG 4059 Pyrometallurgy	3
ENG 3003 Engineering Communication EAL ^	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major or double major in Mathematics.

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) / Bachelor of Mathematical and Computer Sciences:

MATHS 1013 Mathematics IM	3
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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.

Bachelor of Engineering (Honours) (Chemical) / Bachelor of Science (BE(Hons)(Chem) BSc)

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

Overview

Through this double degree program students can combine the concepts of chemical engineering with science. The chemical engineering program will provide students with a background in the physical sciences, chemical engineering core disciplines, integrated design skills and research training. Students choose a science specialisation in Energy and Environment, Process and Product Engineering, or Food, Wine and Biomolecular Engineering. Through the science program, students learn a number of transferable skills including analytical methods, laboratory and field techniques, information technology skills, teamwork, initiative and the ability to communicate and cooperate with people from a range of backgrounds and expertise.

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 and the Institute of Chemical Engineers (IChemE) (UK).

The Bachelor of Engineering (Honours) (Chemical) / Bachelor of Science 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) (Chemical) / Bachelor of Science

There shall be a Bachelor of Engineering (Honours) (Chemical) / Bachelor of Science.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Chemical) / Bachelor of Science, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 84 from the Bachelor of Engineering (Honours);

Courses to the value of 36 units, including a major from the Bachelor of Science.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

CHEM ENG 1007 Introduction to Process Engineering	3
CHEM ENG1011 Introduction to Process Modelling	3
CHEM ENG 2010 Principles of Process Engineering	3
CHEM ENG 2011 Process Engineering Thermodynamics	3
CHEM ENG 2014 Process Heat Transfer	3
CHEM ENG 2016 Professional Practice II	3
CHEM ENG 2018 Process Fluid Mechanics	3
CHEM ENG 3024 Professional Practice III	3
CHEM ENG 3029 Material Science & Engineering	3
CHEM ENG 3030 Simulation & Concept Design	3
CHEM ENG 3031 Process Control & Instrumentation	3
CHEM ENG 3033 Separation Processes	3
CHEM ENG 3034 Kinetics & Reactor Design	3
CHEM ENG 3035 Multi-phase Fluid & Particle Mechanics.....	3
CHEM ENG 3036 Unit Operations Laboratory	3
CHEM ENG 4014 Plant Design Project.....	6
CHEM ENG 4034 Professional Practice IV.....	3
CHEM ENG 4050 Advanced Chemical Engineering	3

CHEM ENG 4054 Research Project	3
or	
CHEM ENG 4055 Advanced Unit Operations Laboratory.....	3
CHEM ENG 4056 Research Practice.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
plus	
CHEM 1100 Chemistry IA.....	3
and	
CHEM 1200 Chemistry IB.....	3
or	
CHEM 1101 Foundations of Chemistry IA.....	3
and	
CHEM 1201 Foundations of Chemistry IB.....	3

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 6 units from the following:

CHEM ENG 4046 Combustion Processes	3
CHEM ENG 4048 Bio-Fuels, Biomass & Wastes	3
CHEM ENG 4051 Water & Wastewater Engineering	3
CHEM ENG 4053 Pinch Analysis & Process Synthesis.....	3
CHEM ENG 4058 Hydrometallurgy & Electrometallurgy.....	3
CHEM ENG 4059 Pyrometallurgy	3
ENG 3003 Engineering Communication EAL ^	3

^ 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 Bachelor of Science Requirements

Courses to the value of 36 units, including a major from the Bachelor of Science. Consult the Academic Program Rules for the degree of Bachelor of Science.

2.1.4 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) / Bachelor of Science:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Chemical) / Bachelor of Science (Biotechnology) (BE(Hons)(Chem) BSc(Biotech))

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

Overview

Through this double degree program students can combine the concepts of chemical engineering with science (biotechnology). The chemical engineering program will provide students with a background in the physical sciences, chemical engineering core disciplines, integrated design skills and research training. Students choose a science specialisation in Energy and Environment, Process and Product Engineering, or Food, Wine and Biomolecular Engineering. Through the science program, students learn a number of transferable skills including analytical methods, laboratory and field techniques, information technology skills, teamwork, initiative and the ability to communicate and cooperate with people from a range of backgrounds and expertise.

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 and the Institute of Chemical Engineers (IChemE) (UK).

The Bachelor of Engineering (Honours) (Chemical) / Bachelor of Science (Biotechnology) 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) (Chemical) / Bachelor of Science (Biotechnology)

There shall be a Bachelor of Engineering (Honours) (Chemical) / Bachelor of Science (Biotechnology).

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Chemical) / Bachelor of Science (Biotechnology), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 84 units from the Bachelor of Engineering (Honours) (Chemical);

Courses to the value of 36 units, including a major from the Bachelor of Science (Biotechnology).

2.1.1 Core Courses

CHEM ENG 1007 Introduction to Process Engineering	3
CHEM ENG 1011 Introduction to Process Modelling	3
CHEM ENG 2010 Principles of Process Engineering	3
CHEM ENG 2011 Process Engineering Thermodynamics	3
CHEM ENG 2014 Process Heat Transfer	3
CHEM ENG 2015 Principles of Biotechnology II	3
CHEM ENG 2016 Professional Practice II	3
CHEM ENG 2018 Process Fluid Mechanics	3
CHEM ENG 3024 Professional Practice III	3
CHEM ENG 3029 Material Science & Engineering	3
CHEM ENG 3030 Simulation & Concept Design	3
CHEM ENG 3031 Process Control & Instrumentation	3
CHEM ENG 3033 Separation Processes	3
CHEM ENG 3034 Kinetics & Reactor Design	3
CHEM ENG 3035 Multi-phase Fluid & Particle Mechanics	3
CHEM ENG 3036 Unit Operations Laboratory	3
CHEM ENG 4014 Plant Design Project	6
CHEM ENG 4034 Professional Practice IV	3
CHEM ENG 4050 Advanced Chemical Engineering	3
CHEM ENG 4054 Research Project	3

or	
CHEM ENG 4055 Advanced Unit Operations Laboratory.....	3
CHEM ENG 4056 Research Practice.....	3
BIOLOGY 1101 Biology I: Molecules, Genes and Cells.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
BIOCHEM 2502 Biochemistry II (Biotech) Molecular & Cell Biology.....	3
BIOCHEM 2503 Biochemistry II (Biotechnology): Metabolism.....	3
BIOCHEM 3000 Molecular & Structural Biology III	6
BIOLOGY 1201 Biology I: Human Perspectives.....	3
BIOTECH 3000 Biotechnology Practice III	6
MICRO 2504 Microbiology II (Biotechnology).....	3
PHARM 3010 Pharmacology A III	6
plus	
CHEM 1100 Chemistry IA.....	3
and	
CHEM 1200 Chemistry IB.....	3
or	
CHEM 1101 Foundations of Chemistry IA.....	3
and	
CHEM 1201 Foundations of Chemistry IB.....	3
plus	
BIOCHEM 3001 Cell & Development Biology III	6
or	
PHARM 3011 Pharmacology B III	6
Engineering Communication	
ENG 3003 Engineering Communication EAL ^	3

^ 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.

2.1.2 Bachelor of Science (Biotechnology) Requirements

Courses to the value of 36 units, including a major from the Bachelor of Science (Biotechnology). Consult the Academic Program Rules for the degree of Bachelor of Science.

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) / Bachelor of Science (Biotechnology):

MATHS 1013 Mathematics IM..... 3

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.

Bachelor of Engineering (Honours) (Chemical and Pharmaceutical) (BE(Hons)(ChemPharma))

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

Overview

This program combines knowledge of basic chemistry, mathematics and biology with engineering principles and real world economic considerations. The first two years of the academic program are spent developing an understanding of the foundation courses of pharmaceutical engineering, which are increasingly put into practise in the third and fourth years via major design, research and experimental projects.

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) (Chemical and Pharmaceutical) is an AQF Level 8 qualification with a standard full-time duration of 4 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) (Chemical and Pharmaceutical)

There shall be a Bachelor of Engineering (Honours) (Chemical and Pharmaceutical).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Chemical and Pharmaceutical), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

BIOCHEM 2501 Biochemistry II: Metabolism	3
BIOLOGY 1101 Biology I: Molecules, Genes & Cells	3
BIOLOGY 1201 Biology I: Human Perspectives.....	3
CHEM 2510 Chemistry IIA.....	3
CHEM 2540 Medicinal & Biological Chemistry II	3
CHEM 3214PE Medicinal & Biological Chemistry III	3
CHEM ENG 1007 Introduction to Process Engineering	3
CHEM ENG 1010 Professional Practice I.....	3
CHEM ENG 2010 Principles of Process Engineering	3
CHEM ENG 2011 Process Engineering Thermodynamics	3
CHEM ENG 2014 Process Heat Transfer	3
CHEM ENG 2018 Process Fluid Mechanics ...	3
CHEM ENG 3021 Pharmaceutical Dosage Form & Manufacturing	3
CHEM ENG 3024 Professional Practice III	3
CHEM ENG 3030 Simulation and Concept Design	3
CHEM ENG 3031 Process Control & Instrumentation	3
CHEM ENG 3034 Kinetics & Reactor Design	3
CHEM ENG 3035 Multi-Phase Fluid & Particle Mechanics.....	3
CHEM ENG 3036 Unit Operations Laboratory	3
CHEM ENG 4014 Plant Design Project.....	6
CHEM ENG 4034 Professional Practice IV.....	3
CHEM ENG 4036 Pharmaceutical Process Validation & Quality	3
CHEM ENG 4038 Particulate Processes & Colloid Science	3
CHEM ENG 4054 Research Project	3
or	
CHEM ENG 4055 Advanced Unit Operations Laboratory	3
CHEM ENG 4056 Research Practice.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3

MATHS 2201 Mathematics IIA.....	3
PHARM 2100 Drugs, Chemicals & Health	3
plus	
CHEM 1100 Chemistry IA.....	3
and	
CHEM 1200 Chemistry IB.....	3
or	
CHEM 1101 Foundations of Chemistry IA.....	3
and	
CHEM 1201 Foundations of Chemistry IB.....	3

Engineering Communication

ENG 3003 Engineering Communication	
EAL ^	3

^ 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.

2.1.2 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 96 units for the Bachelor of Engineering (Honours):

MATHS 1013 Mathematics IM.....	3
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2.1.3 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Civil and Architectural) (BE(Hons)(CivArch))

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

Overview

This program will provide students with skills and knowledge in the planning, design, construction and operation of engineered systems for a diverse range of constructions. This program combines civil and structural engineering, mechanical engineering and the creative design aspects from architecture. The first two years of the program build a scientific, architectural design and engineering foundation for the more specialist architectural engineering courses, which predominate in the third and fourth years.

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) (Civil and Architectural) is an AQF Level 8 qualification with a standard full-time duration of 4 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) (Civil and Architectural)

There shall be a Bachelor of Engineering (Honours) (Civil and Architectural).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Civil and Architectural), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 1013 Introduction to Architectural Engineering	3
C&ENVENG 2025 Strength of Materials IIA....	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 2072 Structural Engineering Design.....	3
C&ENVENG 3001 Structural Mechanics IIIA....	3
C&ENVENG 3005 Structural Design III (Concrete).....	3
C&ENVENG 3007 Structural Design III (Steel)	3
C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4068 Computer Methods of Structural Analysis	3
C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
DESST 1504 Representation I.....	3
DESST 1505 History Theory I.....	3
DESST 1506 Design Studio II.....	6
DESST 1507 Construction I.....	3
DESST 1508 Environment I.....	3
DESST 2517 Environment II.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MECH ENG 2021 Thermo-Fluids I.....	3

2.1.2 Electives

Courses to the value of 9 units from the following:

C&ENVENG 4107 Prestressed Concrete Structures.....	3
C&ENVENG 4099 Structural Response to Blast Loading	3
C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4069 Advanced Reinforced Concrete.....	3
C&ENVENG 4056 Linear Geostatistics.....	3
CHEM ENG 4051 Water & Wastewater Treatment.....	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3
DESST 3519 Advanced Architecture Technologies.....	3
ENG 3003 Engineering Communication EAL ^	3
MINING 3072 Mining Geomechanics.....	3
MINING 4102 Mine Geotechnical Engineering.....	3

or

other undergraduate courses offered by the University that are available to the student, with approval of the Head of School.

^ 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 96 units for the Bachelor of Engineering (Honours):

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Civil and Environmental) (BE(Hons)(CivEnv))

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

Overview

This program includes a core of civil engineering analysis and design, along with detailed studies in environmental science and engineering. It has a particular emphasis on water resources management and pollution control. Computer-based methods are used extensively in the program. The first two years of the program build a mathematical, scientific and engineering design foundation for the third and fourth years where studies include professional engineering courses, specialisations, communication and management courses and project work. The program includes studies in environmental economics and environmental law.

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) (Civil and Environmental) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Civil and Environmental)

There shall be a Bachelor of Engineering (Honours) (Civil and Environmental).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Civil and Environmental), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering, Modelling & Analysis IA.....	3

C&ENVENG 2067 Construction, Management & Surveying	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 4037 Introduction to Environmental Law	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil	6
CHEM ENG 2017 Transport Processes in the Environment	3
CHEM ENG 4051 Water & Wastewater Engineering	3
ECON 3500 Resource and Environmental Economics III	3
ENV BIOL 1002 Ecological Issues I.....	3
ENV BIOL 2005 Ecology for Engineers II.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
plus	
Courses to the value of at least 3 units from the following:	
GEOLOGY 1104 Geology for Engineers I	3
COMP SCI 1010 Puzzle Based Learning	3
and	

Courses to the value of at least 3 units from the following:

ENV BIOL 3012WT Integrated Catchment Management III.....	3
C&ENVENG 3012 Geotechnical Engineering Design III	3

2.1.2 Electives

Courses to the value of at least 3 units from the following:

Environmental Engineering

SOIL&WAT 3007WT GIS for Environmental Management III.....	3
ENV BIOL 3012WT Integrated Catchment Management III.....	3
MINING 4104 Socio-Environmental Aspects of Mining	3
SOIL&WAT 3010 Remote Sensing III	3

Geotechnical / Mining Engineering

C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management	3
C&ENVENG 4115 Flood Estimation & Modelling	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Arts (BE(Hons)(CivEnv) BA)

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 civil and environmental engineering with arts. The civil and environmental engineering program includes a core of civil engineering analysis and design, along with detailed studies in environmental science and engineering. It has a particular emphasis on water resources management and pollution control. Computer-based methods are used extensively in the program. In the arts program, students are able to specialise in areas of their choice by taking a 'major' (from one of 25 areas) and potentially a 'minor' (from a range of areas).

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) (Civil and Environmental) / Bachelor of Arts 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) (Civil and Environmental) / Bachelor of Arts

There shall be a Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Arts.

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Arts, the

student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 90 units from the Bachelor of Engineering (Honours) (Civil and Environmental);

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2067 Construction, Management & Surveying	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4037 Introduction to Environmental Law	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3

C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
CHEM ENG 2017 Transport Processes in the Environment	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3
ECON 3500 Resource and Environmental Economics III	3
ENV BIOL 1002 Ecological Issues I.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
plus	
Courses to the value of 3 units from the following:	
ENV BIOL 3012WT Integrated Catchment Management III.....	3
C&ENVENG 3012 Geotechnical Engineering Design III	3

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

Environmental Engineering

SOIL&WAT 3007WT GIS for Environmental Management III.....	3
ENV BIOL 3012WT Integrated Catchment Management III.....	3
MINING 4104 Socio-Environmental Aspects of Mining	3
SOIL&WAT 3010 Remote Sensing III	3

Geotechnical / Mining Engineering

C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management	3
C&ENVENG 4115 Flood Estimation & Modelling	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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 Bachelor of Arts Requirements

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements. Consult the Academic Program Rules for the degree of Bachelor of Arts.

2.1.4 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) / Bachelor of Arts: MATHS 1013 Mathematics IM..... 3

2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Finance (BE(Hons)(CivEnv) BFin)

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

Overview

Through this double degree program students can combine the concepts of civil and environmental engineering with finance. The civil and environmental engineering program includes a core of civil engineering analysis and design, along with detailed studies in environmental science and engineering. It has a particular emphasis on water resources management and pollution control. Computer-based methods are used extensively in the program. The finance program introduces students to the global and institutional aspects of our financial systems.

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) (Civil and Environmental) / Bachelor of Finance 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) (Civil and Environmental) / Bachelor of Finance

There shall be a Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Finance.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Finance, the student must complete satisfactorily a

program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 84 units from the Bachelor of Engineering (Honours) (Civil and Environmental);

Courses to the value of 36 units from the Bachelor of Finance.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling Analysis IA.....	3
C&ENVENG 2067 Construction Management & Surveying	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4037 Introduction to Environmental Law	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4222 Research Project Part 1: Civil	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
ENV BIOL 1002 Ecological Issues I.....	3

MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3
plus	
Courses to the value of 3 units from the following:	
ENV BIOL 3012WT Integrated Catchment Management III.....	3
C&ENVENG 3012 Geotechnical Engineering Design III.....	3

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

Environmental Engineering

SOIL&WAT 3007WT GIS for Environmental Management III.....	3
ENV BIOL 3012WT Integrated Catchment Management III.....	3
MINING 4104 Socio-Environmental Aspects of Mining.....	3
SOIL&WAT 3010 Remote Sensing III.....	3

Geotechnical / Mining Engineering

C&ENVENG 3012 Geotechnical Engineering Design III.....	3
C&ENVENG 4106 Introduction to Geostatistics.....	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering.....	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management.....	3
C&ENVENG 4115 Flood Estimation & Modelling.....	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^.....	3
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^ 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 Bachelor of Finance Courses

ACCTING 1002 Accounting for Decision Makers I.....	3
CORPFIN 2500 Business Finance II.....	3
CORPFIN 2501 Financial Institutions Management II.....	3
CORPFIN 3501 Portfolio Theory & Management III.....	3

ECON 1000 Principles of Macroeconomics I.....	3
ECON 1004 Principles of Microeconomics I.....	3
ECON 1009 International Financial Institutions & Markets I.....	3
ECON 2504 Intermediate Econometrics II.....	3
Courses to the value of 3 units from the following:	
CORPFIN 2502 Business Valuation II.....	3
ECON 2508 Financial Economics II.....	3
plus	

Courses to the value of 3 units from the following:

CORPFIN 3502 Options, Futures & Risk Management III.....	3
MATHS 3012 Financial Modelling: Tools & Techniques III.....	3
plus	

Level III Finance courses to the value of 6 units.

2.1.4 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) / Bachelor of Finance:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Mathematical and Computer Sciences (BE(Hons)(CivEnv) BMaCompSc)

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

Overview

Through this double degree program students can combine the concepts of civil and environmental engineering with mathematical and computer sciences. The civil and environmental engineering program includes a core of civil engineering analysis and design, along with detailed studies in environmental science and engineering. It has a particular emphasis on water resources management and pollution control. Computer-based methods are used extensively in the program. The mathematical and computer sciences program includes a range of mathematics, statistics and computer science courses.

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) (Civil and Environmental) / Bachelor of Mathematical and Computer Sciences 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) (Civil and Environmental) / Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Mathematical and Computer Sciences, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 96 units from the Bachelor of Engineering (Honours) (Civil and Environmental);

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences.

2.1.1 Computer Science Major

Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 2067 Construction, Management & Surveying	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4037 Introduction to Environmental Law	3

C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3
C&ENVENG 4034 Engineering Management IV.....	3
C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
CHEM ENG 2017 Transport Processes in the Environment.....	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3
ECON 3500 Resource and Environmental Economics III.....	3
ENV BIOL 1002 Ecological Issues I.....	3
ENV BIOL 2005 Ecology for Engineers II.....	3
ENV BIOL 3012WWT Integrated Catchment Management III.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3

Bachelor of Engineering (Honours) - Electives

Courses to the value of at least 3 units from the following:

Environmental Engineering

SOIL&WAT 3007WWT GIS for Environmental Management III.....	3
MINING 4104 Socio-Environmental Aspects of Mining.....	3
SOIL&WAT 3010 Remote Sensing III.....	3

Geotechnical / Mining Engineering

C&ENVENG 4106 Introduction to Geostatistics.....	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering.....	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management.....	3
C&ENVENG 4115 Flood Estimation & Modelling.....	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^.....	3
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^ 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.

Bachelor of Mathematical and Computer Sciences requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major in Computer Science.

2.1.2 Mathematics Major

Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics.....	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2067 Construction, Management & Surveying.....	3
C&ENVENG 2068 Environmental Engineering & Sustainability II.....	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA.....	3
C&ENVENG 3029 Environmental Modelling & Management.....	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management.....	3
C&ENVENG 4037 Introduction to Environmental Law.....	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3
C&ENVENG 4034 Engineering Management IV.....	3
C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
CHEM ENG 2017 Transport Processes in the Environment.....	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3
ECON 3500 Resource and Environmental Economics III.....	3

ENV BIOL 1002 Ecological Issues I.....	3
ENV BIOL 2005 Ecology for Engineers II.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3

plus

Courses to the value of at least 3 units from the following:

GEOLOGY 1104 Geology for Engineers I	3
COMP SCI 1010 Puzzle Based Learning	3

plus

Courses to the value of at least 3 units from the following:

ENV BIOL 3012WT Integrated Catchment Management III.....	3
C&ENVENG 3012 Geotechnical Engineering Design III	3

Engineering Communication

ENG 3003 Engineering Communication	
EAL ^	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major or double major in Mathematics.

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) / Bachelor of Mathematical and Computer Sciences:

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Science (BE(Hons)(CivEnv) BSc)

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

Overview

Through this double degree program students can combine the concepts of civil and environmental engineering with science. The civil and environmental engineering program includes a core of civil engineering analysis and design, along with detailed studies in environmental science and engineering. It has a particular emphasis on water resources management and pollution control. Computer-based methods are used extensively in the program. Studies in Science may be chosen from biological sciences, chemistry, geology, physics and mathematics. Through the science program, students learn a number of transferable skills including analytical methods, laboratory and field techniques, information technology skills, teamwork, initiative and the ability to communicate and cooperate with people from a range of backgrounds and expertise.

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) (Civil and Environmental) / Bachelor of Science 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) (Civil and Environmental) / Bachelor of Science

There shall be a Bachelor of Engineering (Honours) (Civil and Environmental) / Bachelor of Science.

2. Qualification Requirements

2.1 Academic Program

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

Courses to the value of 81 units from the Bachelor of Engineering (Honours) (Civil and Environmental);

Courses to the value of 39 units, including a major from the Bachelor of Science.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2067 Construction, Management & Surveying	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4037 Introduction to Environmental Law	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3

C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
C&ENVENG 4034 Engineering Management IV	3
ECON 3500 Resource and Environmental Economics III	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
plus Courses to the value of 3 units from the following:	
MATHS 2202 Engineering Mathematics IIB.....	3
Level II Science course.....	3

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

Environmental Engineering

SOIL&WAT 3007WT GIS for Environmental Management III.....	3
ENV BIOL 3012WT Integrated Catchment Management III.....	3
MINING 4104 Socio-Environmental Aspects of Mining	3
SOIL&WAT 3010 Remote Sensing III	3

Geotechnical / Mining Engineering

C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management	3
C&ENVENG 4115 Flood Estimation & Modelling	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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 Bachelor of Science Requirements

Courses to the value of 39 units, including a major from the Bachelor of Science. Consult the Academic Program Rules for the degree of Bachelor of Science.

2.1.4 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) / Bachelor of Science:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Civil and Structural) (BE(Hons)(CivStruct))

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

Overview

This program will provide students with skills and knowledge in creating and maintaining the physical infrastructure of society while managing and conserving natural resources. The program has an emphasis on engineering problem-solving and design and analysis using modern, computer-based methods. The first and second years of the program develop mathematics and science skills, with fundamental engineering and design courses. Third and fourth years include professional engineering courses, specialisations, communication and management courses and project work within the main areas of structural, geotechnical and water engineering.

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) (Civil and Structural) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

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

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

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (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 96 units:

2.1.1 Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2025 Strength of Materials IIA	3

C&ENVENG 2067 Construction, Management & Surveying	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2071 Water Engineering IA	3
C&ENVENG 2072 Structural Engineering Design	3
C&ENVENG 3001 Structural Mechanics IIIA.....	3
C&ENVENG 3005 Structural Design III (Concrete).....	3
C&ENVENG 3007 Structural Design III (Steel)	3
C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4068 Computer Methods of Structural Analysis	3
C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
plus	
Courses to the value of at least 3 units from the following:	
COMP SCI 1010 Puzzle Based Learning	3
GEOLOGY 1104 Geology for Engineers I	3
plus	
Courses to the value of at least 3 units from the following:	
C&ENVENG 3029 Environmental Modelling & Management	3
CHEM ENG 4051 Water & Wastewater Engineering	3

2.1.2 Electives

Courses to the value of 9 units taken from one of the following specialisations:

Structural Engineering

C&ENVENG 4069 Advanced Reinforced Concrete.....	3
C&ENVENG 4099 Structural Response to Blast Loading	3
C&ENVENG 4107 Prestressed Concrete Structures.....	3
C&ENVENG 4113EX Christchurch Earthquake Study Tour.....	3

Geotechnical

C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management	3
C&ENVENG 4115 Flood Estimation & Modelling	3
CHEM ENG 4051 Water & Wastewater Engineering	3

Environmental Engineering

C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3

Mining Engineering

MINING 3072 Mine Geomechanics	3
MINING 4102 Mine Geotechnical Engineering	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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Students should undertake at least two electives from the Structural, Geotechnical or Water Engineering groups and may only undertake one Mining Engineering elective in any one year.

Alternatively, students may substitute up to 3 units of Level II / III courses offered by the School of Mathematical Sciences.

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.

^ 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 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Arts (BE(Hons)(CivStruct) BA)

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 civil and structural engineering with arts. 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. In the arts program, students are able to specialise in areas of their choice by taking a 'major' (from one of 25 areas) and potentially a 'minor' (from a range of areas).

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) (Civil and Structural) / Bachelor of Arts 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) (Civil and Structural) / Bachelor of Arts

There shall be a Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Arts.

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Arts, the student must complete satisfactorily a program of study consisting of the following

requirements with a combined total of not less than 120 units:

Courses to the value of 90 units from the Bachelor of Engineering (Honours) (Civil and Structural);

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2025 Strength of Materials IIA	3
C&ENVENG 2067 Construction, Management & Surveying	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 2072 Structural Engineering Design	3
C&ENVENG 3001 Structural Mechanics IIIA.....	3
C&ENVENG 3005 Structural Design III (Concrete).....	3
C&ENVENG 3007 Structural Design III (Steel)	3
C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4068 Computer Methods of Structural Analysis	3

C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 9 units from the following:

Structural Engineering

C&ENVENG 4069 Advanced Reinforced Concrete.....	3
C&ENVENG 4099 Structural Response to Blast Loading	3
C&ENVENG 4107 Prestressed Concrete Structures.....	3
C&ENVENG 4113EX Christchurch Earthquake Study Tour.....	3

Geotechnical

C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management	3
C&ENVENG 4115 Flood Estimation & Modelling	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3

Environmental Engineering

C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3

Mining Engineering

MINING 3072 Mine Geomechanics.....	3
MINING 4102 Mine Geotechnical Engineering.....	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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Students should undertake at least two electives from the Structural, Geotechnical or Water Engineering groups and may only undertake one Mining Engineering elective in any one year.

Alternatively, students may substitute up to 3 units of Level II / III courses offered by the School of Mathematical Sciences.

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.

^ 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 Bachelor of Arts Requirements

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements. Consult the Academic Program Rules for the degree of Bachelor of Arts.

2.1.4 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) / Bachelor of Arts: MATHS 1013 Mathematics IM..... 3

2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Finance (BE(Hons)(CivStruct) BFin)

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

Overview

Through this double degree program students can combine the concepts of civil and structural engineering with finance. 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. The finance program introduces students to the global and institutional aspects of our financial systems.

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) (Civil and Structural) / Bachelor of Finance 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) (Civil and Structural) / Bachelor of Finance

There shall be a Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Finance.

2. Qualification Requirements

2.1 Academic Program

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

Courses to the value of 84 units from the Bachelor of Engineering (Honours) (Civil and Structural);

Courses to the value of 36 units from the Bachelor of Finance.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2025 Strength of Materials IIA....	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 2072 Structural Engineering Design	3
C&ENVENG 3001 Structural Mechanics IIIA....	3
C&ENVENG 3005 Structural Design III (Concrete).....	3
C&ENVENG 3007 Structural Design III (Steel)	3
C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4068 Computer Methods of Structural Analysis	3
C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
plus	

Courses to the value of at least 3 units from the following:

C&ENVENG 3029 Environmental Modelling & Management	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 9 units from the following:

Structural Engineering

C&ENVENG 4069 Advanced Reinforced Concrete.....	3
C&ENVENG 4099 Structural Response to Blast Loading	3
C&ENVENG 4107 Prestressed Concrete Structures.....	3
C&ENVENG 4113EX Christchurch Earthquake Study Tour.....	3

Geotechnical

C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management	3
C&ENVENG 4115 Flood Estimation & Modelling	3
CHEM ENG 4051 Water & Wastewater Engineering	3

Environmental Engineering

C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3

Mining Engineering

MINING 3072 Mine Geomechanics	3
MINING 4102 Mine Geotechnical Engineering	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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Students should undertake at least two electives from the Structural, Geotechnical or Water Engineering groups and may only undertake one Mining Engineering elective in any one year.

Alternatively, students may substitute up to 3 units of Level II / III courses offered by the School of Mathematical Sciences.

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.

^ 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 Bachelor of Finance Courses

ACCTING 1002 Accounting for Decision Makers I	3
CORPFIN 2500 Business Finance II	3
CORPFIN 2501 Financial Institutions Management II.....	3
CORPFIN 3501 Portfolio Theory & Management III.....	3
ECON 1000 Principles of Macroeconomics I	3
ECON 1004 Principles of Microeconomics I	3
ECON 1009 International Financial Institutions & Markets I.....	3
ECON 2504 Intermediate Econometrics II.....	3

Courses to the value of 3 units from the following:

CORPFIN 2502 Business Valuation II.....	3
ECON 2508 Financial Economics II.....	3

plus

Courses to the value of 3 units from the following:

CORPFIN 3502 Options, Futures & Risk Management III.....	3
MATHS 3012 Financial Modelling: Tools & Techniques III	3

plus

Level III Finance courses to the value of 6 units.

2.1.4 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) / Bachelor of Finance:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Mathematical and Computer Sciences (BE(Hons)(CivStruct) BMaCompSc)

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

Overview

Through this double degree program students can combine the concepts of civil and structural engineering with mathematical and computer sciences. 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. The mathematical and computer sciences program includes a range of mathematics, statistics and computer science courses.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Mathematical and Computer Sciences 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) (Civil and Structural) / Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Civil and Structural)

/ Bachelor of Mathematical and Computer Sciences, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 96 units from the Bachelor of Engineering (Honours) (Civil and Structural);

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences.

2.1.1 Computer Science Major

Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 2025 Strength of Materials IIA....	3
C&ENVENG 2067 Construction, Management & Surveying	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 2072 Structural Engineering Design	3
C&ENVENG 3001 Structural Mechanics IIIA....	3
C&ENVENG 3005 Structural Design III (Concrete).....	3
C&ENVENG 3007 Structural Design III (Steel)	3
C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3

C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4068 Computer Methods of Structural Analysis	3
plus Courses to the value of at least 3 units from the following:	

C&ENVENG 3029 Environmental Modelling & Management	3
CHEM ENG 4051 Water & Wastewater Engineering	3

**Bachelor of Engineering (Honours) -
Electives**

Courses to the value of 9 units from the
following:

Structural Engineering

C&ENVENG 4069 Advanced Reinforced Concrete.....	3
C&ENVENG 4099 Structural Response to Blast Loading	3
C&ENVENG 4107 Prestressed Concrete Structures.....	3
C&ENVENG 4113EX Christchurch Earthquake Study Tour.....	3

Geotechnical

C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management	3
C&ENVENG 4115 Flood Estimation & Modelling	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3

Environmental Engineering

C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3

C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3

Mining Engineering

MINING 3072 Mine Geomechanics.....	3
MINING 4102 Mine Geotechnical Engineering	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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Students should undertake at least two
electives from the Structural, Geotechnical
or Water Engineering groups and may only
undertake one Mining Engineering elective in
any one year.

Alternatively, students may substitute up to
3 units of Level II / III courses offered by the
School of Mathematical Sciences.

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.

^ 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.

**Bachelor of Mathematical and Computer
Sciences Requirements**

Courses to the value of 24 units from the
Bachelor of Mathematical and Computer
Sciences, including a major in Computer
Science.

2.1.2 Mathematics Major

**Bachelor of Engineering (Honours) - Core
Courses**

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2025 Strength of Materials IIA.....	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 2072 Structural Engineering Design	3
C&ENVENG 3001 Structural Mechanics IIIA.....	3

C&ENVENG 3005 Structural Design III (Concrete).....	3
C&ENVENG 3007 Structural Design III (Steel)	3
C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4068 Computer Methods of Structural Analysis	3
plus	
Courses to the value of at least 3 units from the following:	
GEOLOGY 1104 Geology for Engineers I	3
COMP SCI 1010 Puzzle Based Learning	3
plus	
Courses to the value of at least 3 units from the following:	
C&ENVENG 3029 Environmental Modelling & Management	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3
Bachelor of Engineering (Honours) - Electives	
Courses to the value of 9 units from the following:	
Structural Engineering	
C&ENVENG 4069 Advanced Reinforced Concrete.....	3
C&ENVENG 4099 Structural Response to Blast Loading	3
C&ENVENG 4107 Prestressed Concrete Structures.....	3
C&ENVENG 4113EX Christchurch Earthquake Study Tour.....	3
Geotechnical	
C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3

C&ENVENG 4056 Linear Geostatistics.....	3
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Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management	3
C&ENVENG 4115 Flood Estimation & Modelling	3
CHEM ENG 4051 Water & Wastewater Engineering	3

Environmental Engineering

C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3

Mining Engineering

MINING 3072 Mine Geomechanics	3
MINING 4102 Mine Geotechnical Engineering	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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Students should undertake at least two electives from the Structural, Geotechnical or Water Engineering groups and may only undertake one Mining Engineering elective in any one year.

Alternatively, students may substitute up to 3 units of Level II / III courses offered by the School of Mathematical Sciences.

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.

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major or double major in Mathematics.

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) / Bachelor of
Mathematical and Computer Sciences:
MATHS 1013 Mathematics IM..... 3

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.

Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Science (BE(Hons)(CivStruct) BSc)

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

Overview

Through this double degree program students can combine the concepts of civil and structural engineering with science. 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. Science studies may be chosen from biological sciences, chemistry, geology, physics and mathematics. Through the science program, students learn a number of transferable skills including analytical methods, laboratory and field techniques, information technology skills, teamwork, initiative and the ability to communicate and cooperate with people from a range of backgrounds and expertise.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Science 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) (Civil and Structural) / Bachelor of Science

There shall be a Bachelor of Engineering (Honours) (Civil and Structural) / Bachelor of Science.

2. Qualification Requirements

2.1 Academic Program

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

Courses to the value of 81 units from the Bachelor of Engineering (Honours) (Civil and Structural);

Courses to the value of 39 units, including a major from the Bachelor of Science.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2025 Strength of Materials IIA.....	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 2072 Structural Engineering Design IIA.....	3
C&ENVENG 3001 Structural Mechanics IIIA.....	3
C&ENVENG 3005 Structural Design III (Concrete).....	3
C&ENVENG 3007 Structural Design III (Steel)	3
C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4034 Engineering Management IV	3

C&ENVENG 4068 Computer Methods of Structural Analysis	3
C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
plus	
Courses to the value of at least 3 units from the following:	
MATHS 2202 Engineering Mathematics IIB.....	3
plus	
Level II Science courses to the value of 3 units.	

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 6 units from the following:

Structural Engineering

C&ENVENG 4069 Advanced Reinforced Concrete.....	3
C&ENVENG 4099 Structural Response to Blast Loading	3
C&ENVENG 4107 Prestressed Concrete Structures.....	3
C&ENVENG 4113EX Christchurch Earthquake Study Tour.....	3

Geotechnical

C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management.....	3
C&ENVENG 4115 Flood Estimation & Modelling	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3

Environmental Engineering

C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3
C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3

Mining Engineering

MINING 3072 Mine Geomechanics.....	3
MINING 4102 Mine Geotechnical Engineering.....	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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Students should undertake at least two electives from the Structural, Geotechnical or Water Engineering groups and may only undertake one Mining Engineering elective in any one year.

Alternatively, students may substitute up to 3 units of Level II / III courses offered by the School of Mathematical Sciences.

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.

^ 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 Bachelor of Science Requirements

Courses to the value of 39 units, including a major from the Bachelor of Science. Consult the Academic Program Rules for the degree of Bachelor of Science.

2.1.4 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) / Bachelor of Science:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Civil, Structural and Environmental) (BE(Hons)(CivStructEnv))

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 civil and structural engineering with civil and environmental engineering. 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. The civil and environmental engineering program includes a core of civil engineering analysis and design, along with detailed studies in environmental science and engineering. It has a particular emphasis on water resources management and pollution control. Computer-based methods are used extensively in the program.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Civil, Structural and Environmental) 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) (Civil, Structural and Environmental)

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

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Civil, Structural and Environmental), 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 and Design IA.....	3
C&ENVENG 1009 Civil and Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2025 Strength of Materials IIA.....	3
C&ENVENG 2067 Construction, Management & Surveying	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 2072 Structural Engineering Design	3
C&ENVENG 3001 Structural Mechanics IIIA.....	3
C&ENVENG 3005 Structural Design III (Concrete).....	3
C&ENVENG 3007 Structural Design III (Steel)	3
C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 3029 Environmental Modelling & Management	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4037 Introduction to Environmental Law	3
C&ENVENG 4108 Environmental Engineering Design IVA.....	3

C&ENVENG 4109 Environmental Engineering Design IVB.....	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4068 Computer Methods of Structural Analysis	3
C&ENVENG 4110 Environmental Engineering Design IVC.....	3
C&ENVENG 4222 Research Project Part 1: Civil.....	3
C&ENVENG 4223 Research Project Part 2: Civil.....	6
CHEM ENG 2017 Transport Processes in the Environment	3
CHEM ENG 4051 Water & Wastewater Engineering.....	3
ECON 3500 Resource and Environmental Economics III	3
ENV BIOL 1002 Ecological Issues I.....	3
ENV BIOL 2005 Ecology for Engineers II.....	3
ENV BIOL 3012WWT Integrated Catchment Management III.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
plus	
Courses to the value of at least 3 units from the following:	
GEOLOGY 1104 Geology for Engineers I	3
COMP SCI 1010 Puzzle Based Learning	3

2.1.2 Electives

Courses to the value of 6 units from the following:

Structural Engineering

C&ENVENG 4069 Advanced Reinforced Concrete.....	3
C&ENVENG 4099 Structural Response to Blast Loading	3
C&ENVENG 4107 Prestressed Concrete Structures.....	3
C&ENVENG 4113EX Christchurch Earthquake Study Tour.....	3

Geotechnical

C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4112 Advanced Civil Geotechnical Engineering	3
C&ENVENG 4056 Linear Geostatistics.....	3

Water Engineering

C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4114 Hydrological Modelling & Water Resources Management	3

C&ENVENG 4115 Flood Estimation & Modelling	3
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Environmental Engineering

MINING 4104 Socio-Environmental Aspects of Mining	3
SOIL&WAT 3007WWT GIS for Environmental Management III.....	3

Mining Engineering

MINING 3072 Mine Geomechanics.....	3
MINING 4102 Mine Geotechnical Engineering.....	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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Students should undertake at least two electives from the Structural, Geotechnical or Water and Environmental Engineering groups and may only undertake one Mining Engineering elective in any one year.

^ 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) (Civil, Structural and Environmental):

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Mechanical - Computational) (BE(Hons)(Mech-Comp))

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

Overview

This program entails computational modelling, simulation and optimisation within the engineering sciences. Computational engineering is an indispensable tool, along with experimentation and theoretical predication, in engineering practice and the advancement of scientific knowledge. With advances in computer technology and the algorithms required to solve complex problems, computational engineering enables the development of systems that are compatible with current trends of reduced emissions, fuel efficiency and the use of environmentally sustainable materials. The first two years of the program build a scientific and engineering foundation, which is followed by more specialist computational engineering and mathematics courses in the third and fourth years.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience.

The Bachelor of Engineering (Honours) has a standard full-time duration of 4 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) (Mechanical - Computational)

There shall be a Bachelor of Engineering (Honours) (Mechanical - Computational).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Mechanical - Computational), the student must complete satisfactorily a program of study consisting of

the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

APP MTH 3002 Fluid Mechanics III.....	3
APP MTH 3014 Optimisation III	3
APP MTH 3021 Modelling with Ordinary Differential Equations III	3
APP MTH 3023 Partial Differential Equations and Waves III	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 3078 Engineering Management & Planning IIIA.....	3
C&ENVENG 4034 Engineering Management IV	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2202 Engineering Mathematics IIB....	3
MATHS 2104 Numerical Methods II	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1100 Introduction to Mechanical Engineering	3
MECH ENG 2002 Stress Analysis & Design....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3030 Structural Design & Solid Mechanics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics	3
MECH ENG 4143A/B Honours Project Level IV.....	9

2.1.2 Electives

Courses to the value of 9 units from the following:

ENG 3003 Engineering Communication EAL ^	3
CHEM ENG 4032 Composite & Multiphase Polymers	3
MECH ENG 4101 Biomechanical Engineering	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4145 Sustainable Thermal Technologies.....	3
MECH ENG 4144 Renewable Fluid Power Technology.....	3
PHYSICS 3534 Computational Physics III.....	3

^ 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 96 units for the Bachelor of Engineering (Honours):

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Computer Systems) (BE(Hons)(CompSys))

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

Overview

This program covers the processes required to create a computing system in its own right, or to use a computer as part of an engineering system, perhaps as a controller of industrial plant or equipment. An emphasis is placed on underlying principles and techniques so that graduates will be able to learn and apply new technologies as they emerge in the future. This program provides a strong background in mathematics, physics and electronics as well as extensive practice in the design, operation and integration of hardware and software systems. A computer systems project in the final year gives students the opportunity to further explore a specialist topic.

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 and the Australian Computer Society (ACS).

The Bachelor of Engineering (Honours) (Computer Systems) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Computer Systems)

There shall be a Bachelor of Engineering (Honours) (Computer Systems).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Computer Systems), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3

COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3006 Software Engineering & Project	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3027 Control	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9
ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2202 Engineering Mathematics IIB....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3

2.1.2 Electives

Courses to the value of 9 units from the following:	
ENG 3003 Engineering Communication	
EAL ^	3
COMP SCI 3005 Computer Architecture	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 4053 Digital Microelectronics	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4058 Power Quality & Condition Monitoring	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
ELEC ENG 4061 Image Processing	3

ELEC ENG 4063 Communications	3
ELEC ENG 4067 Antennas & Propagation.....	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Arts (BE(Hons)(CompSys) BA)

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 computer systems engineering with arts. The computer systems program covers the processes required to create a computing system in its own right, or to use a computer as part of an engineering system, perhaps as a controller of industrial plant or equipment. In the arts program, students are able to specialise in areas of their choice by taking a 'major' (from one of 25 areas) and potentially a 'minor' (from a range of areas).

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia and the Australian Computer Society (ACS).

The Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Arts 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) (Computer Systems) / Bachelor of Arts

There shall be a Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Arts.

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Arts, the student must complete satisfactorily a program of study

consisting of the following requirements with a combined total of not less than 120 units:

Courses to the value of 90 units from the Bachelor of Engineering (Honours) (Computer Systems);

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3006 Software Engineering & Project	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3027 Control	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2.....	9
ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3

MATHS 2202 Engineering Mathematics IIB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

COMP SCI 3005 Computer Architecture	3
ENG 3003 Engineering Communication EAL ^	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 4053 Digital Microelectronics.....	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4058 Power Quality & Condition Monitoring	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4063 Communications.....	3
ELEC ENG 4067 Antennas & Propagation.....	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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 Bachelor of Arts Requirements

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements. Consult the Academic Program Rules for the degree of Bachelor of Arts.

2.1.4 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) / Bachelor of Arts:
MATHS 1013 Mathematics IM..... 3

2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Finance (BE(Hons)(CompSys) BFin)

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

Overview

Through this double degree program students can combine the concepts of computer systems engineering with finance. The computer systems program covers the processes required to create a computing system in its own right, or to use a computer as part of an engineering system, perhaps as a controller of industrial plant or equipment. The finance program introduces students to the global and institutional aspects of our financial systems.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Finance 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) (Computer Systems) / Bachelor of Finance

There shall be a Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Finance.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Finance, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 84 units from the Bachelor of Engineering (Honours) (Computer Systems);

Courses to the value of 36 units from the Bachelor of Finance.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3006 Software Engineering & Project	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3027 Control.....	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3
Engineering Communication	
ENG 3003 Engineering Communication	
EAL ^	3

^ 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.

2.1.2 Bachelor of Finance Courses

ACCTING 1002 Accounting for Decision Makers I	3
CORPFIN 2500 Business Finance II	3
CORPFIN 2501 Financial Institutions Management II.....	3
CORPFIN 3501 Portfolio Theory & Management III.....	3
ECON 1000 Principles of Macroeconomics I.....	3
ECON 1004 Principles of Microeconomics I.....	3
ECON 1009 International Financial Institutions & Markets I.....	3
ECON 2504 Intermediate Econometrics II.....	3
Courses to the value of 3 units from the following:	
CORPFIN 2502 Business Valuation II.....	3
ECON 2508 Financial Economics II.....	3
plus	
Courses to the value of 3 units from the following:	
CORPFIN 3502 Options, Futures & Risk Management III.....	3
MATHS 3012 Financial Modelling: Tools & Techniques III	3
plus	
Level III Finance courses to the value of 6 units.	

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) / Bachelor of Finance:

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Mathematical and Computer Sciences (BE(Hons)(CompSys) BMaCompSc)

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

Overview

Through this double degree program students can combine the concepts of computer systems engineering with mathematical and computer sciences. The computer systems program covers the processes required to create a computing system in its own right, or to use a computer as part of an engineering system, perhaps as a controller of industrial plant or equipment. The mathematical and computer sciences program includes a range of mathematics, statistics and computer science courses.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia and the Australian Computer Society (ACS).

The Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Mathematical and Computer Sciences 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) (Computer Systems) / Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Mathematical and Computer Sciences, with either a Computer Science or Mathematics major, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 96 units from the Bachelor of Engineering (Honours) (Computer Systems);

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences.

2.1.1 Computer Science Major

Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3006 Software Engineering & Project	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3027 Control	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2.....	9

ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3

Bachelor of Engineering (Honours) - Electives

Courses to the value of 9 units from the following:

COMP SCI 3005 Computer Architecture	3
ENG 3003 Engineering Communication EAL ^	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 4052 Special Studies in EEE	3
ELEC ENG 4053 Digital Microelectronics	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4058 Power Quality & Condition Monitoring	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4063 Communications	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major in Computer Science.

2.1.2 Mathematics Major

Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3

COMP SCI 3006 Software Engineering & Project	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3027 Control	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9
ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3

Bachelor of Engineering (Honours) - Electives

Courses to the value of 9 units from the following:

COMP SCI 3005 Computer Architecture	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 4052 Special Studies in EEE	3
ELEC ENG 4053 Digital Microelectronics	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4058 Power Quality & Condition Monitoring	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4063 Communications	3
ENG 3003 Engineering Communication EAL ^	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major or double major in Mathematics.

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) / Bachelor of Mathematical and Computer Sciences:

MATHS 1013 Mathematics IM..... 3

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.

Bachelor of Engineering (Honours) (Electrical and Electronic) (BE(Hons)(Elec&Elec))

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

Overview

This program embraces both electrical and electronic engineering and provides graduates with a wide range of fundamental scientific knowledge relevant to electrical and electronic engineering. An emphasis is placed on underlying principles and techniques so that graduates will be able to learn and apply new technologies as they emerge in the future. The first two years of this degree provide a solid foundation in electronics, physics, mathematics and computer programming. This background means that graduates have the opportunity to work in many specialist areas, and are prepared with lifelong learning skills so that they are able to change specialisations over the course of their careers. Beginning in the second year of the degree, the focus shifts towards learning new and more advanced electrical and electronics technologies. In the final year of the program, students can specialize in a particular area by studying advanced courses and by completing a capstone project that further develops research, technical and professional skills.

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) (Electrical and Electronic) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Electrical and Electronic)

There shall be a Bachelor of Engineering (Honours) (Electrical and Electronic).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Electrical and Electronic), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals and Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3027 Control.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3021 Electric Energy Systems	3
ELEC ENG 3024 Project Management for Electrical Engineering	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3031 Power Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9
ELEC ENG 4055 Systems Engineering Management	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2202 Engineering Mathematics IIB....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3

2.1.2 Electives

Courses to the value of 12 units from the following:	
COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3

ELEC ENG 4053 Digital Microelectronics	3
ELEC ENG 4054 Telecommunications Systems	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4058 Power Quality & Condition Monitoring	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4062 Distributed Generation Technologies.....	3
ELEC ENG 4063 Communications.....	3
ELEC ENG 4067 Antennas & Propagation.....	3
ENG 3003 Engineering Communication EAL ^	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Arts (BE(Hons)(Elec&Elec) BA)

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 electrical and electronic engineering with arts. The electrical and electronic program embraces both electrical and electronic engineering and provides graduates with a wide range of fundamental scientific knowledge relevant to electrical and electronic engineering. In the arts program, students are able to specialise in areas of their choice by taking a 'major' (from one of 25 areas) and potentially a 'minor' (from a range of areas).

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Arts 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) (Electrical and Electronic) / Bachelor of Arts

There shall be a Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Arts.

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Arts, the student must complete satisfactorily a program of study consisting of the following

requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 90 units from the Bachelor of Engineering (Honours) (Electrical and Electronic);

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 3021 Electric Energy Systems	3
ELEC ENG 3024 Project Management for Electrical Engineers	3
ELEC ENG 3027 Control	3
ELEC ENG 3031 Power Systems	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9
ELEC ENG 4055 Systems Engineering Management	3
ELEC ENG 4064 Business Management.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3

PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
ELEC ENG 4053 Digital Microelectronics	3
ELEC ENG 4054 Telecommunications Systems	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4058 Power Quality & Condition Monitoring	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4062 Distributed Generation Technologies	3
ELEC ENG 4063 Communications	3
ELEC ENG 4067 Antennas & Propagation.....	3
ENG 3003 Engineering Communication EAL ^	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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 Bachelor of Arts Requirements

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements. Consult the Academic Program Rules for the degree of Bachelor of Arts.

2.1.4 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) / Bachelor of Arts:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Finance (BE(Hons)(Elec&Elec) BFin)

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

Overview

Through this double degree program students can combine the concepts of electrical and electronic engineering with finance. The electrical and electronic program embraces both electrical and electronic engineering and provides graduates with a wide range of fundamental scientific knowledge relevant to electrical and electronic engineering. The finance program introduces students to the global and institutional aspects of our financial systems.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Finance 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) (Electrical and Electronic) / Bachelor of Finance

There shall be a Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Finance.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering(Honours) (Electrical and Electronic) / Bachelor of Finance, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 84 units from the Bachelor of Engineering (Honours) (Electrical and Electronic);

Courses to the value of 36 units from the Bachelor of Finance.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3021 Electric Energy Systems	3
ELEC ENG 3024 Project Management for Electrical Engineering	3
ELEC ENG 3027 Control	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 3031 Power Systems	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9
ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2202 Engineering Mathematics IIB....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3

Engineering Communication

ENG 3003 Engineering Communication
EAL ^ 3

^ 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.

2.1.5 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.

2.1.2 Bachelor of Finance Courses

ACCTING 1002 Accounting for Decision
Makers I 3

CORPFIN 2500 Business Finance II 3

CORPFIN 2501 Financial Institutions
Management II..... 3

CORPFIN 3501 Portfolio Theory &
Management III..... 3

ECON 1000 Principles of
Macroeconomics I..... 3

ECON 1004 Principles of
Microeconomics I..... 3

ECON 1009 International Financial
Institutions & Markets I..... 3

ECON 2504 Intermediate Econometrics II..... 3

Courses to the value of 3 units from the
following:

CORPFIN 2502 Business Valuation II..... 3

ECON 2508 Financial Economics II..... 3

plus

Courses to the value of 3 units from the
following:

CORPFIN 3502 Options, Futures & Risk
Management III..... 3

MATHS 3012 Financial Modelling: Tools &
Techniques III 3

plus

Level III Finance courses to the value of 6
units.

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) / Bachelor of Finance:

MATHS 1013 Mathematics IM..... 3

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.

Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Mathematical and Computer Sciences (BE(Hons)(Elec&Elec) BMaCompSc)

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

Overview

Through this double degree program students can combine the concepts of electrical and electronic engineering with mathematical and computer sciences. The electrical and electronic program embraces both electrical and electronic engineering and provides graduates with a wide range of fundamental scientific knowledge relevant to electrical and electronic engineering. The mathematical and computer sciences program includes a range of mathematics, statistics and computer science courses.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Mathematical and Computer Sciences 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) (Electrical and Electronic) / Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Mathematical and Computer Sciences, with either a Computer Science or Mathematics major, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 96 units from the Bachelor of Engineering (Honours) (Electrical and Electronic);

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences.

2.1.1 Computer Science Major

Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals and Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3021 Electric Energy Systems.....	3
ELEC ENG 3024 Project Management for Electrical Engineering.....	3
ELEC ENG 3027 Control.....	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3031 Power Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3034 Telecommunications Principles.....	3

ELEC ENG 4068A/B Honours Project Part 1 & 2.....	9
ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3

Bachelor of Engineering (Honours) - Electives

Courses to the value of 9 units from the following:

COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
ELEC ENG 4053 Digital Microelectronics	3
ELEC ENG 4054 Telecommunications Systems	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4058 Power Quality & Condition Monitoring	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4062 Distributed Generation Technologies.....	3
ELEC ENG 4063 Communications.....	3
ELEC ENG 4067 Antennas & Propagation.....	3
ENG 3003 Engineering Communication EAL ^	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major in Computer Science.

2.1.2 Mathematics Major

Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3

COMP SCI 2000 Computer Systems.....	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3021 Electric Energy Systems.....	3
ELEC ENG 3024 Project Management for Electrical Engineering.....	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 3027 Control	3
ELEC ENG 3031 Power Systems	3
ELEC ENG 4068A/B Honours Project.....	9
ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3

Bachelor of Engineering (Honours) - Electives

Courses to the value of 9 units from the following:

COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
ELEC ENG 4053 Digital Microelectronics	3
ELEC ENG 4054 Telecommunications Systems	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4058 Power Quality & Condition Monitoring	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4062 Distributed Generation Technologies.....	3

ELEC ENG 4063 Communications	3
ELEC ENG 4067 Antennas & Propagation.....	3
ENG 3003 Engineering Communication	
EAL ^	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major or double major in Mathematics.

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) / Bachelor of Mathematical and Computer Sciences:

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Science (BE(Hons)(Elec&Elec) BSc)

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 electrical and electronic engineering with science. The program provides a strong background in mathematics and physics as well as practical experience in the design and operation of electrical, electronic and software systems. Students complete the standard four years of engineering courses minus 3 units, together with an extra 27 units of Physics courses.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Science 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) (Electrical and Electronic) / Bachelor of Science

There shall be a Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Science.

2. Qualification Requirements

2.1 Academic Program

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

Courses to the value of 93 units from the Bachelor of Engineering (Honours) (Electrical and Electronic);

Courses to the value of 27 units from the Bachelor of Science.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals and Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3021 Electric Energy Systems	3
ELEC ENG 3024 Project Management for Electrical Engineers	3
ELEC ENG 3027 Control	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3031 Power Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9
ELEC ENG 4055 Systems Engineering Management	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2202 Engineering Mathematics IIB....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 9 units from the following:

COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
ELEC ENG 4053 Digital Microelectronics	3
ELEC ENG 4054 Telecommunications Systems	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4058 Power Quality & Condition Monitoring	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4062 Distributed Generation Technologies	3
ELEC ENG 4063 Communications	3
ELEC ENG 4067 Antennas & Propagation	3
ENG 3003 Engineering Communication EAL ^	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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 Bachelor of Science Requirements

Courses to the value of 27 units from the Bachelor of Science as follows:

PHYSICS 2510 Physics IIA.....	3
PHYSICS 2520 Physics IIB.....	3
PHYSICS 2532 Classical Physics II.....	3
PHYSICS 2534 Electromagnetism II	3
PHYSICS 3002 Experimental Physics III	3
PHYSICS 3542 Physics III	6

plus

Level III Physics electives to the value of 6 units.

2.1.4 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) / Bachelor of Science:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Electrical and Sustainable Energy) (BE(Hons)(Elec&SustEngy))

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

Overview

This program focuses on the electrical technologies supporting renewable energy systems including solar and wind generation technologies, and the power systems that we use to transfer electric energy across long distances. This program is suitable for students interested in environmentally friendly electrical energy production through developing higher performance and lower cost renewable energy systems. This program provides a general electrical engineering background with specialised knowledge in sustainable energy. It includes introductory courses in electrical machines, power electronics and power systems followed by advanced courses in renewable power generation and the distribution of renewable energy. A sustainable energy-related project in the final year gives students the opportunity to further explore a specialist topic in this field.

Students are also required to complete 12 weeks of approved practical experience during their study.

The Bachelor of Engineering (Honours) (Electrical and Sustainable Energy) is an AQF Level 8 qualification with a standard full-time duration of 4 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) (Electrical and Sustainable Energy)

There shall be a Bachelor of Engineering (Honours) (Electrical and Sustainable Energy).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Electrical and Sustainable Energy), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I	3
COMP SCI 1201 Introduction to Programming for Engineers	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3021 Electric Energy Systems.....	3
ELEC ENG 3027 Control	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3029 Project Management for Sustainable Energy.....	3
ELEC ENG 3031 Power Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9
ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
ELEC ENG 4062 Distributed Generation Technologies	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2202 Engineering Mathematics IIB....	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3

MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 4145 Sustainable Thermal Technologies.....	3
TECHCOMM 3006 Energy Management, Economics & Policy.....	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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.

2.1.2 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 96 units for the Bachelor of Engineering (Honours):

MATHS 1013 Mathematics IM.....	3
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2.1.3 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Mechanical) (BE(Hons)(Mech))

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

Overview

The Bachelor of Engineering (Mechanical) has a strong focus on design with a design and build project in second year followed by a more advanced project in third year and a large design / research project in the final year. This program provides a core understanding of mechanical disciplines and problem solving skills. The program also develops written and oral communication skills and familiarity with project management. The first two years include mathematics and physics with an introduction to the basic principles of design, structural analysis, thermodynamics, materials, fluid mechanics, control and computer programming, complemented by laboratory and project work. In the third year courses are extended to develop a more complex understanding in these fields coupled with a design project, allowing students to prepare for the final year. Fourth year allows for some technical specialisation through the requirement to complete five elective courses, in addition to a project work and a management course.

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) (Mechanical) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Mechanical)

There shall be a Bachelor of Engineering (Honours) (Mechanical).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Mechanical), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MATHS 2104 Numerical Methods II	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1100 Introduction to Mechanical Engineering	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3030 Structural Design & Solid Mechanics.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 4143A/B Honours Project Level IV.....	9

2.1.2 Electives

Courses to the value of 15 units from the following:	
CHEM ENG 4032 Composites & Multiphase Polymers	3
ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering.....	3

MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4125 Stresses in Plates & Shells.....	3
MECH ENG 4127 Wind Engineering.....	3
MECH ENG 4144 Renewable Fluid Power Technology.....	3
MECH ENG 4145 Sustainable Thermal Technologies.....	3

^ 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 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Arts (BE(Hons)(Mech) BA)

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 mechanical engineering with arts. The mechanical engineering program has a strong focus on design with a design and build project in second year followed by a more advanced project in third year and a large design / research project in the final year. This program provides a core understanding of mechanical disciplines and problem solving skills. In the arts program, students are able to specialise in areas of their choice by taking a 'major' (from one of 25 areas) and potentially a 'minor' (from a range of areas).

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) (Mechanical) / Bachelor of Arts 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) (Mechanical) / Bachelor of Arts

There shall be a Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Arts.

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Arts, the student must complete satisfactorily a program of study consisting of the following

requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 90 units from the Bachelor of Engineering (Honours) (Mechanical);

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2202 Engineering Mathematics IIB....	3
MATHS 2104 Numerical Methods II	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1100 Introduction to Mechanical Engineering	3
MECH ENG 2002 Stress Analysis & Design ...	3
MECH ENG 2100 Design Practice	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3030 Structural Design & Solid Mechanics.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems	3
MECH ENG 3105 Sustainability & the Environment.....	3

MECH ENG 4143A/B Honours Project
Level IV..... 9

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 9 units from the following:

ENG 3003 Engineering Communication
EAL ^ 3

MECH ENG 4101 Biomechanical
Engineering..... 3

MECH ENG 4102 Advanced PID Control..... 3

MECH ENG 4104 Advanced Topics in Fluid
Mechanics..... 3

MECH ENG 4105 Advanced Vibrations 3

MECH ENG 4107 Airconditioning 3

MECH ENG 4111 CFD for Engineering
Applications 3

MECH ENG 4112 Combustion Technology
& Emission Control 3

MECH ENG 4114 Corrosion: Principles &
Prevention 3

MECH ENG 4115 Engineering Acoustics 3

MECH ENG 4118 Finite Element Analysis
of Structures 3

MECH ENG 4120 Fracture Mechanics..... 3

MECH ENG 4121 Materials Selection &
Failure Analysis 3

MECH ENG 4124 Robotics M..... 3

MECH ENG 4125 Stresses in Plates &
Shells..... 3

MECH ENG 4127 Wind Engineering..... 3

MECH ENG 4144 Renewable Fluid Power
Technology..... 3

MECH ENG 4145 Sustainable Thermal
Technologies..... 3

^ 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 Bachelor of Arts Requirements

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements. Consult the Academic Program Rules for the degree of Bachelor of Arts.

2.1.4 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) / Bachelor of Arts:
MATHS 1013 Mathematics IM..... 3

2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Finance (BE(Hons)(Mech) BFin)

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

Overview

Through this double degree program students can combine the concepts of mechanical engineering with finance. The mechanical engineering program has a strong focus on design with a design and build project in second year followed by a more advanced project in third year and a large design / research project in the final year. This program provides a core understanding of mechanical disciplines and problem solving skills. The finance program introduces students to the global and institutional aspects of our financial systems.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Finance 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) (Mechanical) / Bachelor of Finance

There shall be a Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Finance.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Finance, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 84 units from the Bachelor of Engineering (Honours) (Mechanical);

Courses to the value of 36 units from the Bachelor of Finance.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2202 Engineering Mathematics IIB....	3
MATHS 2104 Numerical Methods II	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1100 Introduction to Mechanical Engineering	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3030 Structural Design & Solid Mechanics.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics	3
MECH ENG 4143A/B Honours Project Level IV.....	9

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

CHEM ENG 4032 Composites & Multiphase Polymers	3
ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4125 Stresses in Plates & Shells.....	3
MECH ENG 4127 Wind Engineering.....	3
MECH ENG 4144 Renewable Fluid Power Technology.....	3
MECH ENG 4145 Sustainable Thermal Technologies.....	3

^ 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 Bachelor of Finance Courses

ACCTING 1002 Accounting for Decision Makers I	3
CORPFIN 2500 Business Finance II	3
CORPFIN 2501 Financial Institutions Management II.....	3
CORPFIN 3501 Portfolio Theory & Management III.....	3
ECON 1000 Principles of Macroeconomics I.....	3
ECON 1004 Principles of Microeconomics I.....	3
ECON 1009 International Financial Institutions & Markets I.....	3
ECON 2504 Intermediate Econometrics II.....	3

Courses to the value of 3 units from the following:

CORPFIN 2502 Business Valuation II	3
ECON 2508 Financial Economics II.....	3

plus

Courses to the value of 3 units from the following:

CORPFIN 3502 Options, Futures & Risk Management III.....	3
MATHS 3012 Financial Modelling: Tools & Techniques III	3

plus

Level III Finance courses to the value of 6 units.

2.1.4 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) / Bachelor of Finance:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Mathematical and Computer Sciences (BE(Hons)(Mech) BMaCompSc)

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

Overview

Through this double degree program students can combine the concepts of mechanical engineering with mathematical and computer sciences. The mechanical engineering program has a strong focus on design with a design and build project in second year followed by a more advanced project in third year and a large design / research project in the final year. This program provides a core understanding of mechanical disciplines and problem solving skills. The mathematical and computer sciences program includes a range of mathematics, statistics and computer science courses.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Mathematical and Computer Sciences 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) (Mechanical) / Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Mathematical and Computer Sciences, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 96 units from the Bachelor of Engineering (Honours) (Mechanical);

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences.

2.1.1 Computer Science Major

Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MATHS 2104 Numerical Methods II	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1100 Introduction to Mechanical Engineering	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3

MECH ENG 3030 Structural Design & Solid Mechanics.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems.....	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 4143A/B Honours Project Level IV.....	9

Bachelor of Engineering (Honours) - Electives

Courses to the value of 12 units from the following:

ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering.....	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention.....	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4125 Stresses in Plates & Shells.....	3
MECH ENG 4127 Wind Engineering.....	3
MECH ENG 4144 Renewable Fluid Power Technology.....	3
MECH ENG 4145 Sustainable Thermal Technologies.....	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major in Computer Science.

2.1.2 Mathematics Major

Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MATHS 2104 Numerical Methods II	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1100 Introduction to Mechanical Engineering	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM.....	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3030 Structural Design & Solid Mechanics.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 4143A/B Honours Project Level IV.....	9

Bachelor of Engineering (Honours) - Electives

Courses to the value of 15 units from the following:

ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering.....	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4107 Airconditioning	3

MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4125 Stresses in Plates & Shells.....	3
MECH ENG 4127 Wind Engineering.....	3
MECH ENG 4144 Renewable Fluid Power Technology.....	3
MECH ENG 4145 Sustainable Thermal Technologies	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major or double major in Mathematics.

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) / Bachelor of Mathematical and Computer Sciences:

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Science (BE(Hons)(Mech) BSc)

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

Overview

Through this double degree program students can combine the concepts of mechanical engineering with science. The mechanical engineering program has a strong focus on design with a design and build project in second year followed by a more advanced project in third year and a large design / research project in the final year. This program provides a core understanding of mechanical disciplines and problem solving skills. Science studies may be chosen from chemistry, physics and mathematics. Through the science program, students learn a number of transferable skills including analytical methods, laboratory and field techniques, information technology skills, teamwork, initiative and the ability to communicate and cooperate with people from a range of backgrounds and expertise.

In addition to the academic program of study, students must complete a total of 12 weeks of full-time practical experience. Graduates of the program qualify for professional membership of Engineers Australia.

The Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Science 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) (Mechanical) / Bachelor of Science

There shall be a Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Science.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Science, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 78 units from the Bachelor of Engineering (Honours) (Mechanical);

Courses to the value of 42 units, including a major from the Bachelor of Science.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1100 Introduction to Mechanical Engineering	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3030 Structural Design & Solid Mechanics.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems	3

MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 4143A/B Honours Project Level IV	9

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering.....	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4144 Renewable Fluid Power Technology.....	3
MECH ENG 4145 Sustainable Thermal Technologies.....	3

^ 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 Bachelor of Science Requirements

Courses to the value of 42 units, including a major from the Bachelor of Science. Consult the Academic Program Rules for the degree of Bachelor of Science.

2.1.4 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) / Bachelor of Science:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Mechanical and Aerospace) (BE(Hons)(Mech&Aero))

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

Overview

In this program, students will be exposed to problems specific to the aerospace industry such as how a vehicle moves, how high and how fast it can travel, how it holds together under the forces it experiences and how it is kept on course. Students analyse and solve these problems using their knowledge of mechanics and dynamics, materials and joining methods, thermodynamics, heat transfer, vibrations, guidance, control and modelling techniques. The first two years of the program have a strong emphasis on design and engineering science fundamentals. This allows students to build a solid foundation in core mechanical engineering skills and knowledge and includes mathematics and physics with an introduction to the basic principles of design, stress analysis, thermodynamics, materials, fluid mechanics, physiology, anatomy, control and computer programming, complemented by laboratory and project work. In the third year, students undertake some mechanical engineering courses in thermodynamics, heat transfer, fluid mechanics, environmental engineering, vibrations, control and solid mechanics as well as specialist aerospace specific courses. The fourth year is almost entirely focused on specialist aerospace engineering courses.

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) (Mechanical and Aerospace) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Mechanical and Aerospace)

There shall be a Bachelor of Engineering (Honours) (Mechanical and Aerospace)

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Mechanical and Aerospace) the student must complete

satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1102 Introduction to Aerospace Engineering.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 3026 Aerospace Materials & Structures.....	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 2101 Mechatronics IM.....	3
MECH ENG 3100 Aeronautical Engineering	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3104 Space Vehicle Design.....	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 4100 Advanced Topics in Aerospace Engineering	3
MECH ENG 4106 Aerospace Propulsion	3
MECH ENG 4108 Aircraft Design.....	3
MECH ENG 4143A/B Honours Project Level IV.....	9

2.1.2 Electives

Courses to the value of 6 units from the following:

CHEM ENG 4032 Composites & Multiphase Polymers	3
ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4125 Stresses in Plates & Shells.....	3
MECH ENG 4127 Wind Engineering.....	3
MECH ENG 4144 Renewable Fluid Power Technology.....	3
MECH ENG 4145 Sustainable Thermal Technologies	3

^ 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 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Mechanical and Aerospace) / Bachelor of Science (BE(Hons)(Mech&Aero) BSc)

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

Overview

Through this double degree program students can combine the concepts of mechanical engineering with science. In the mechanical and aerospace program students will be exposed to problems specific to the aerospace industry such as how a vehicle moves, how high and how fast it can travel, how it holds together under the forces it experiences and how it is kept on course. Students analyse and solve these problems using their knowledge of mechanics and dynamics, materials and joining methods, thermodynamics, heat transfer, vibrations, guidance, control and modelling techniques. Student also develop their skills and knowledge base in sciences which opens new opportunities for them to specialise in the future.

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) (Mechanical and Aerospace) / Bachelor of Science is an AQF Level 8 qualification with a standard full-time duration of 6 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) (Mechanical and Aerospace) / Bachelor of Science

There shall be a Bachelor of Engineering (Honours) (Mechanical and Aerospace) / Bachelor of Science.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Mechanical and Aerospace) / Bachelor of Science, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 144 units, comprising:

Courses to the value of 102 units from the Bachelor of Engineering (Honours) (Mechanical and Aerospace);

Courses to the value of 42 units, including a major from the Bachelor of Science.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I	3
MATHS 1011 Mathematics IA	3
MATHS 1012 Mathematics IB	3
MATHS 2201 Engineering Mathematics IIA	3
MATHS 2202 Engineering Mathematics IIB	3
MATHS 2104 Numerical Methods II	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1102 Introduction to Aerospace Engineering	3
MECH ENG 2002 Stress Analysis & Design	3
MECH ENG 2019 Dynamics & Control I	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 2021 Thermo-Fluids I	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 3026 Aerospace Materials & Structures	3
MECH ENG 3027 Engineering Systems Design & Communication	3
MECH ENG 3028 Dynamics & Control II	3
MECH ENG 3100 Aeronautical Engineering	3
MECH ENG 3101 Applied Aerodynamics	3
MECH ENG 3102 Heat Transfer & Thermodynamics	3
MECH ENG 3104 Space Vehicle Design	3

MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 4100 Advanced Topics in Aerospace Engineering	3
MECH ENG 4106 Aerospace Propulsion	3
MECH ENG 4108 Aircraft Design.....	3
MECH ENG 4143A/B Honours Project Level IV	9

2.1.2 Bachelor of Engineering (Honours) - Electives

Courses to the value of 12 units from the following:

CHEM ENG 4032 Composites & Multiphase Polymers	3
ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering.....	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4125 Stresses in Plates & Shells.....	3
MECH ENG 4127 Wind Engineering.....	3
MECH ENG 4144 Renewable Fluid Power Technology.....	3
MECH ENG 4145 Sustainable Thermal Technologies.....	3

^ 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 Bachelor of Science Requirements

Courses to the value of 42 units, including a major from the Bachelor of Science. Consult the Academic Program Rules for the degree of Bachelor of Science.

2.1.4 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 144 units for the Bachelor of Engineering (Honours) / Bachelor of Science:

MATHS 1013 Mathematics IM.....	3
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2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Mechanical and Aerospace) / Bachelor of Mathematical and Computer Sciences (BE(Hons)(Mech&Aero) BMaCompSc)

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

Overview

Through this double degree program students can combine the concepts of mechanical and aerospace engineering with mathematical and computer sciences. In the mechanical and aerospace program students will be exposed to problems specific to the aerospace industry such as how a vehicle moves, how high and how fast it can travel, how it holds together under the forces it experiences and how it is kept on course. Students analyse and solve these problems using their knowledge of mechanics and dynamics, materials and joining methods, thermodynamics, heat transfer, vibrations, guidance, control and modelling techniques. The mathematical and computer sciences program includes a range of mathematics, statistics and computer science courses.

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) (Mechanical and Aerospace) / Bachelor of Mathematical and Computer Sciences is an AQF Level 8 qualification with a standard full-time duration of 5 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Mechanical and Aerospace) / Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Engineering (Honours) (Mechanical and Aerospace) / Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Mechanical and Aerospace) / Bachelor of Mathematical and Computer Sciences, with either a Computer Science or Mathematics major, the student must complete satisfactorily a program of study consisting of the following

requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 96 units from the Bachelor of Engineering (Honours) (Mechanical and Aerospace);

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences.

2.1.1 Computer Science Major

Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1202 Object-Oriented Programming for Engineers	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1102 Introduction to Aerospace Engineering	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MECH ENG 2002 Stress Analysis & Design	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 3026 Aerospace Materials & Structures.....	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3100 Aeronautical Engineering	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3104 Space Vehicle Design.....	3

MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 4100 Advanced Topics in Aerospace Engineering	3
MECH ENG 4106 Aerospace Propulsion.....	3
MECH ENG 4108 Aircraft Design.....	3
MECH ENG 4143A/B Honours Project Level IV.....	9

Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

CHEM ENG 4032 Composites & Multiphase Polymers	3
ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering.....	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention.....	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4125 Stresses in Plates & Shells.....	3
MECH ENG 4127 Wind Engineering.....	3
MECH ENG 4144 Renewable Fluid Power Technology.....	3
MECH ENG 4145 Sustainable Thermal Technologies.....	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major in Computer Science.

2.1.2 Mathematics Major

Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1102 Introduction to Aerospace Engineering	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 3026 Aerospace Materials & Structures.....	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 3100 Aeronautical Engineering	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3104 Space Vehicle Design.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 4100 Advanced Topics in Aerospace Engineering	3
MECH ENG 4106 Aerospace Propulsion.....	3
MECH ENG 4108 Aircraft Design.....	3
MECH ENG 4143A/B Honours Project Level IV.....	9

Bachelor of Engineering (Honours) - Electives

Courses to the value of 6 units from the following:

CHEM ENG 4032 Composites & Multiphase Polymers	3
ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering.....	3
MECH ENG 4102 Advanced PID Control.....	3

MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4125 Stresses in Plates & Shells.....	3
MECH ENG 4127 Wind Engineering.....	3
MECH ENG 4144 Renewable Fluid Power Technology.....	3
MECH ENG 4145 Sustainable Thermal Technologies.....	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major or double major in Mathematics.

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) / Bachelor of Mathematical and Computer Sciences:

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Mechanical and Sports) (BE(Hons)(Mech&Sports))

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

Overview

The first two years of this program allows students to build a solid foundation in core mechanical engineering skills and knowledge and includes mathematics and physics with an introduction to the basic principles of design, stress analysis, thermodynamics, materials, fluid mechanics, physiology, anatomy, control and computer programming, complemented by laboratory and project work. Year three develops a more complex understanding in these fields, including aerodynamics, exercise physiology and sports materials coupled with a design project. In year four, more advanced courses in finite element analysis, computational fluid dynamics and biomechanical engineering are included in addition to courses in management and the integration of the fundamental work in the previous years into a range of sports-related courses. The program culminates in a research project that allows students to apply their knowledge to a real sports engineering problem.

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) (Mechanical and Sports) is an AQF Level 8 qualification with a standard full-time duration of 4 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) (Mechanical and Sports)

There shall be a Bachelor of Engineering (Honours) (Mechanical and Sports).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Mechanical and Sports), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

ANAT SC 2200 Functional Human Anatomy II.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1104 Introduction to Sports Engineering.....	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2102 Sports Engineering I.....	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems.....	3
MECH ENG 3107 Sports Engineering II.....	3
MECH ENG 3108 Sports Materials	3
MECH ENG 4101 Biomechanical Engineering.....	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4118 Finite Element Analysis of Structures	3

MECH ENG 4140 Sports Engineering III.....	3
MECH ENG 4143A/B Honours Project Level IV.....	9
PHYSIOL 2510 Human Physiology IIA: Heart, Lung & Neuromuscular Systems.....	3

2.1.2 Electives

Courses to the value of 3 units from the following:

ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4112 Combustion Technologies & Emission Control	3
MECH ENG 4126 Topics in Welded Structures.....	3

^ 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 96 units for the Bachelor of Engineering (Honours):

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Mechanical and Sustainable Energy) (BE(Hons)(Mech&SustEngy))

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

Overview

This program specialises in the design of systems that use heat and fluid flow to generate energy. It includes the assessment of aerodynamics, structural loads, vibrations, thermal power and cooling cycles, combustion and automatic control. In addition to considering more sustainable, traditional forms of energy production, the program is concerned with all possible renewable energy forms including wind, wave, tidal, solar, geothermal, hydro, pumped storage and biomass. This program is suitable for students interested in designing sustainable and renewable energy systems and in solving problems related to sustainability. Graduates will develop the knowledge and skills necessary for designing sustainable and renewable energy systems and in solving problems related to sustainability. The first two years of the program have a strong emphasis on design and engineering science fundamentals. This allows students to build a solid foundation in core mechanical engineering skills and knowledge. Years three and four build on the basic principles established in the first two years and focus on the design of systems that use heat and fluid to generate energy. Students are also required to complete 12 weeks of approved practical experience during their study.

The Bachelor of Engineering (Honours) (Mechanical and Sustainable Energy) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Mechanical and Sustainable Energy)

There shall be a Bachelor of Engineering (Honours) (Mechanical and Sustainable Energy).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Mechanical and Sustainable Energy), the student must complete satisfactorily a program of study consisting of the following requirements with

a combined total of not less than 96 units:

2.1.1 Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I	3
CHEM ENG 4048 Biofuels, Biomass & Wastes	3
DESST 3519 Advanced Architecture Technologies	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 3021 Electric Energy Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1105 Introduction to Sustainable Energy Engineering	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3101 Applied Aerodynamics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4143A/B Honours Project Level IV.....	9
MECH ENG 4144 Renewable Fluid Power Technologies.....	3
MECH ENG 4145 Sustainable Thermal Technologies.....	3
TECHCOMM 3006 Energy Management, Economics & Policy.....	3

2.1.2 Electives

Courses to the value of 6 units from the following:

ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3

^ 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 96 units for the Bachelor of Engineering (Honours):

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Mechatronic) (BE(Hons)(Mecht))

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

Overview

This program combines courses in mechanical engineering and electrical and electronic engineering together with courses in computing, mechatronics and robotics. It includes the study of design, microprocessors, electronics, sensors, actuators, signal processing and control. There is a strong focus on design and project work throughout the program. The first two years of the program have a strong emphasis on design and engineering science fundamentals and some study of electronics in second year. This allows students to build a solid foundation in core mechanical engineering skills and knowledge. In the third year students study an equal mix of mechanical and electronic / electrical engineering courses with additional studies in computer systems and programming. In year four, students are able to choose two elective courses as well as a major project in the mechatronic area.

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) (Mechatronic) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Mechatronic)

There shall be a Bachelor of Engineering (Honours) (Mechatronic).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Mechatronic), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3

ELEC ENG 4059 Power Electronics & Drive Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1103 Introduction to Mechatronic Engineering	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2015 Electronics IIM.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3032 Microcontroller Programming	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 3106 Mechatronics II.....	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4123 Advanced Digital Control.....	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4143A/B Honours Project Level IV.....	9

2.1.2 Electives

Courses to the value of 6 units from the following:

ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3

MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4121 Materials Selection & Failure Analysis	3

^ 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 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Mechatronic) / Bachelor of Arts (BE(Hons)(Mecht) BA)

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 mechatronic engineering with arts. The mechatronic program combines courses in mechanical engineering and electrical and electronic engineering together with courses in computing, mechatronics and robotics. It includes the study of design, microprocessors, electronics, sensors, actuators, signal processing and control. There is a strong focus on design and project work throughout the program. In the arts program, students are able to specialise in areas of their choice by taking a 'major' (from one of 25 areas) and potentially a 'minor' (from a range of areas).

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) (Mechatronic) / Bachelor of Arts is an AQF Level 8 qualification with a standard full-time duration of 5 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Mechatronic) / Bachelor of Arts

There shall be a Bachelor of Engineering (Honours) (Mechatronic) / Bachelor of Arts.

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Mechatronic) / Bachelor of Arts, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 90 units from the Bachelor of Engineering (Honours) (Mechatronic);

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1103 Introduction to Mechatronic Engineering	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 2015 Electronics IIM.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3032 Micro-Controller Programming	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems.....	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 3106 Mechatronics II.....	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4123 Advanced Digital Control.....	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4143A/B Honours Project Level IV	9
Engineering Communication	
ENG 3003 Engineering Communication	
EAL ^	3

^ 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.

2.1.2 Bachelor of Arts Requirements

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements. Consult the Academic Program Rules for the degree of Bachelor of Arts.

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) / Bachelor of Arts:
MATHS 1013 Mathematics IM..... 3

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.

Bachelor of Engineering (Honours) (Mechatronic) / Bachelor of Mathematical and Computer Sciences (BE(Hons)(Mecht) BMACompSc)

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

Overview

Through this double degree program students can combine the concepts of mechatronic engineering with mathematical and computer sciences. The mechatronic program combines courses in mechanical engineering and electrical and electronic engineering together with courses in computing, mechatronics and robotics. It includes the study of design, microprocessors, electronics, sensors, actuators, signal processing and control. There is a strong focus on design and project work throughout the program. The mathematical and computer sciences program includes a range of mathematics, statistics and computer science courses. 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) (Mechatronic) / Bachelor of Mathematical and Computer Sciences 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) (Mechatronic) / Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Engineering (Honours) (Mechatronic) / Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Mechatronic) / Bachelor of Mathematical and Computer Sciences, with either a Computer Science or Mathematics major, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 96 units from the Bachelor of Engineering (Honours) (Mechatronic);

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences.

2.1.1 Computer Science Major

Bachelor of Engineering (Honours) - Core Courses

COMP SCI 1202 Object-Oriented Programming for Engineers	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2202 Engineering Mathematics IIB....	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1103 Introduction to Mechatronic Engineering	3
MECH ENG 2002 Stress Analysis & Design....	3
MECH ENG 2015 Electronics IIM.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3

MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3032 Microcontroller Programming	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 3106 Mechatronics II.....	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4123 Advanced Digital Control.....	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4143A/B Honours Project Level IV.....	9

Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4121 Materials Selection & Failure Analysis	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major in Computer Science.

2.1.2 Mathematics Major

Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 4059 Power Electronics & Drive Systems	3
MATHS 1011 Mathematics IA.....	3

MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 1103 Introduction to Mechatronic Engineering	3
MECH ENG 2002 Stress Analysis & Design.....	3
MECH ENG 2015 Electronics IIM.....	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2101 Mechatronics IM.....	3
MECH ENG 3027 Engineering Systems Design & Communication	3
MECH ENG 3028 Dynamics & Control II.....	3
MECH ENG 3032 Microcontroller Programming	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3103 Manufacturing Engineering & Quality Systems	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 3106 Mechatronics II.....	3
MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4123 Advanced Digital Control.....	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4143A/B Honours Project Level IV.....	9

Bachelor of Engineering (Honours) - Electives

Courses to the value of 6 units from the following:

ENG 3003 Engineering Communication EAL ^	3
MECH ENG 4101 Biomechanical Engineering.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4114 Corrosion: Principles & Prevention	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4121 Materials Selection & Failure Analysis	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major or double major in Mathematics.

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) / Bachelor of Mathematical and Computer Sciences:

MATHS 1013 Mathematics IM..... 3

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.

Bachelor of Engineering (Honours) (Mining) (BE(Hons)(Mining))

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

Overview

This program focuses on analysis and design and combines knowledge from geotechnical, environmental, structural and water engineering, geology, computing, mathematics and finance. The first two years of the Mining Engineering program focus on building engineering, mathematics and science foundations that are further developed in the final two years. Mining Education Australia has developed the third and fourth years of the program, which is taught at the University of Adelaide in common with universities in New South Wales, Western Australia, and Queensland. The program emphasises engineering problem-solving, analysis and design, computer-based methods, and research, communication and management skills.

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) (Mining) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Mining)

There shall be a Bachelor of Engineering (Honours) (Mining).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Mining), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2025 Strength of Materials IIA	3

C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
CHEM ENG 2019 Introduction to Minerals Processing	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
GEOLOGY 1104 Geology for Engineers I	3
GEOLOGY 2504 Economic & Mine Geology II.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 2021 Thermo-Fluids I.....	3
MINING 1011 Introduction to Mining Engineering IA.....	3
MINING 3068 Mine Ventilation.....	3
MINING 3069 Rock Breakage	3
MINING 3070 Resource Estimation.....	3
MINING 3071 Mining Systems	3
MINING 3072 Mining Geomechanics.....	3
MINING 3073 Mine Planning	3
MINING 4104 Socio-Environmental Aspects of Mining	3
MINING 4101 Mine Management.....	3
MINING 4102 Mine Geotechnical Engineering.....	3
MINING 4106 Hard Rock Mine Design & Feasibility	3
MINING 4111 Coal Mine Design & Feasibility	3
MINING 4222 Research Project Part : Mining	3
MINING 4223 Research Project Part 2: MIning.....	6

2.1.2 Electives

Courses to the value of 3 units from the following:

C&ENVENG 4056 Linear Geostatistics.....	3
C&ENVENG 4106 Introduction to Geostatistics	3
ENG 3003 Engineering Communication	
EAL ^	3

MINING 4109 Mining in a Global Environment.....	3
MINING 4112 Advanced Mine Geotechnical Engineering.....	3
MINING 4114 Simulation & Animation for Mining Engineers.....	3
MINING 4107 Surface Mining Systems.....	3

^ 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 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Mining) / Bachelor of Mathematical and Computer Sciences (BE(Hons)(Mining) BMaCompSc)

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

Overview

Through this double degree program students can combine the concepts of mining engineering with mathematical and computer sciences. This mining program focuses on analysis and design and combines knowledge from geotechnical, environmental, structural and water engineering, geology, computing, mathematics and finance. The mathematical and computer sciences program includes a range of mathematics, statistics and computer science courses.

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) (Mining) / Bachelor of Mathematical and Computer Sciences 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) (Mining) / Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Engineering (Honours) (Mining) / Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Mining) / Bachelor

of Mathematical and Computer Sciences, with a Mathematics major, the student must complete satisfactorily a program with combined total of not less than 120 units, comprising:

Courses to the value of 96 units from the Bachelor of Engineering (Honours) (Mining);

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1008 Engineering Planning & Design IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
C&ENVENG 2025 Strength of Materials IIA....	3
C&ENVENG 2068 Environmental Engineering & Sustainability II	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2070 Engineering Modelling & Analysis IIA.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
CHEM ENG 2019 Introduction to Minerals Processing	3
GEOLOGY 1104 Geology for Engineers I	3
GEOLOGY 2504 Economic & Mine Geology II.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 2021 Thermo-Fluids I.....	3
MINING 1011 Introduction to Mining Engineering IA.....	3
MINING 3068 Mine Ventilation.....	3
MINING 3069 Rock Breakage	3
MINING 3070 Resource Estimation.....	3
MINING 3071 Mining Systems	3
MINING 3072 Mining Geomechanics.....	3
MINING 3073 Mine Planning	3

MINING 4101 Mine Management.....	3
MINING 4102 Mine Geotechnical Engineering.....	3
MINING 4104 Socio-Environmental Aspects of Mining	3
MINING 4106 Hard Rock Mine Design & Feasibility	3
MINING 4111 Coal Mine Design & Feasibility	3
MINING 4222 Research Project Part : Mining	3
MINING 4223 Research Project Part 2: Mining.....	6

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.

2.1.1 Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

C&ENVENG 4056 Linear Geostatistics.....	3
C&ENVENG 4106 Introduction to Geostatistics	3
ENG 3003 Engineering Communication EAL ^	3
MINING 4109 Mining in a Global Environment .	3
MINING 4112 Advanced Mine Geotechnical Engineering.....	3
MINING 4114 Simulation & Animation for Mining Engineers.....	3
MINING 4107 Surface Mining Systems.....	3

^ 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.

2.1.2 Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major or double major in Mathematics.

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 taken in Summer Semester 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) / Bachelor of Mathematical and Computer Sciences:

MATHS 1013 Mathematics IM.....	3
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2.1.4 Work Based Training / Extra Mural Studies

Students must complete a total of 12 weeks practical experience, approved by the Faculty

Bachelor of Engineering (Honours) (Mining) / Bachelor of Science (BE(Hons)(Mining) BSc)

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

Overview

Through this double degree program students can combine the concepts of mining engineering with science. The mining program focuses on analysis and design and combines knowledge from geotechnical, environmental, structural and water engineering, geology, computing, mathematics and finance. In addition to their engineering studies, students will be able to undertake studies in a major area of science. 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) (Mining) / Bachelor of Science 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) (Mining) / Bachelor of Science

There shall be a Bachelor of Engineering (Honours) (Mining) / Bachelor of Science.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Mining) / Bachelor of Science, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 81 units from the Bachelor of Engineering (Honours) (Mining);
Courses to the value of 39 units, including a major from the Bachelor of Science.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 1012 Engineering Modelling & Analysis IA.....	3
MINING 1011 Introduction to Mining Engineering IA.....	3
GEOLOGY 1100 Earth's Interior I	3
GEOLOGY 1103 Earth Systems I	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3
MECH ENG 2021 Thermo-Fluids I.....	3
CHEM ENG 2019 Introduction to Minerals Processing	3
C&ENVENG 2025 Strength of Materials IIA.....	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 3221 Research Project Part A: Methodologies & Management	3
C&ENVENG 4224 Research Studies	3
GEOLOGY 2500 Sedimentary Geology II.....	3
GEOLOGY 2504 Economic & Mine Geology II.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MINING 3068 Mine Ventilation.....	3
MINING 3069 Rock Breakage	3
MINING 3070 Resource Estimation.....	3
MINING 3071 Mining Systems	3
MINING 3072 Mining Geomechanics.....	3
MINING 3073 Mine Planning	3
GEOLOGY 2501 Structural Geology II.....	3
GEOLOGY 2502 Igneous and Metamorphic Geology II.....	3
GEOLOGY 3008 Geophysics III.....	3
SOIL&WAT 3010 Remote Sensing III	3
GEOLOGY 3013 Tectonics III.....	3
GEOLOGY 3016 Igneous and Metamorphic Geology III.....	3
GEOLOGY 3019 Field Geoscience Program III.....	3
GEOLOGY 3500 Exploration Methods III.....	3

GEOLOGY 3502 Mineral and Energy Resources III	3
GEOLOGY 3505 Earth Systems History.....	3
MINING 4101 Mine Management.....	3
MINING 4102 Mine Geotechnical Engineering.....	3
MINING 4106 Hard Rock Mine Design & Feasibility	3
MINING 4111 Coal Mine Design & Feasibility	3
MINING 4222 Research Project Part : Mining	3
MINING 4224 Research Project Part 2: Mining/Science.....	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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.

2.1.2 Bachelor of Science Requirements

Courses to the value of 39 units, including a major from the Bachelor of Science. Consult the Academic Program Rules for the degree of Bachelor of Science.

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) / Bachelor of Science:

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Petroleum) (BE(Hons)(Petrol))

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

Overview

This program integrates core petroleum engineering with geosciences and management and builds a strong foundation of mathematics, physics, geology, geophysics, computer applications and engineering principles. Over the course of the program, the subjects studied change from more general engineering topics to very specific petroleum-related topics. There is also a focus on management and business-related aspects. In the first year, students study a range of engineering, mathematics and physics courses that are common to many branches of engineering. Students are also introduced to the petroleum industry and to the key geological, physical and chemical principles that govern recovery from petroleum reservoirs. In the second and third year these areas of study are developed with the addition of a broader range of petroleum engineering and geosciences topics. In fourth year, students expand their technical knowledge and develop business skills such as economic evaluation and project management as well as undertake a final year project.

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) is an AQF Level 8 qualification with a standard full-time duration of 4 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)

There shall be a Bachelor of Engineering (Honours) (Petroleum).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Petroleum), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1007 Introduction to Process Engineering	3
COMP SCI 1201 Introduction to Programming for Engineers	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2104 Numerical Methods II	3
MATHS 2201 Engineering Mathematics IIA.....	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 2021 Thermo-Fluids I.....	3
PETROENG 1005 Introduction to Petroleum Geosciences & the Oil Industry	3
PETROENG 1006 Introduction to Petroleum Engineering.....	3
PETROENG 2001 Reservoir Thermodynamics & Fluid Properties	3
PETROENG 2005 Sedimentology & Stratigraphy.....	3
PETROENG 2009 Formation Evaluation, Petrophysics & Rock Properties	3
PETROENG 2010 Drilling Engineering	3
PETROENG 3001 Reservoir Simulation	3
PETROENG 3005 Reservoir Characterisation & Modelling	3
PETROENG 3007 Well Testing & Pressure Transient Analysis	3
PETROENG 3019 Structural Geology & Seismic Methods.....	3
PETROENG 3020 Production Engineering.....	3
PETROENG 3023 Well Completion & Simulation	3
PETROENG 3025 Reservoir Engineering.....	3
PETROENG 3026 Formation Damage & Productivity Enhancement	3
PETROENG 4037 Unconventional Resources & Recovery.....	3

PETROENG 4022 Integrated Field Development & Economics Project.....	3
PETROENG 4027 Decision Making & Risk Analysis	3
PETROENG 4033 Integrated Reservoir & Project Management.....	3
PETROENG 4034 Petroleum Business & Project Economics.....	3
PETROENG 4035 Reservoirs, Resources & Reserves	3
PHYSICS 1100 Physics IA.....	3
PETROENG 4004A/B Petroleum Engineering Honours Project Part 1 & 2.....	6

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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.

2.1.2 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 96 units for the Bachelor of Engineering (Honours):

MATHS 1013 Mathematics IM.....	3
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2.1.3 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Petroleum and Chemical) (BE(Hons)(PetrolChem))

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 chemical 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 chemical program will provide students with a background in the physical sciences, chemical engineering core disciplines, integrated design skills and research training.

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) / Bachelor of Engineering (Honours) (Chemical) 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 and Chemical)

There shall be a Bachelor of Engineering (Honours) (Petroleum and (Chemical)).

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Petroleum and Chemical), 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

CHEM ENG 1007 Introduction to Process Engineering	3
CHEM ENG 2010 Principles of Process Engineering	3
CHEM ENG 2014 Process Heat Transfer	3
CHEM ENG 2018 Process Fluid Mechanics	3
CHEM ENG 2011 Process Engineering Thermodynamics	3
CHEM ENG 3024 Professional Practice III	3
CHEM ENG 3030 Simulation & Concept Design	3
CHEM ENG 3031 Process Control & Instrumentation	3
CHEM ENG 3033 Separation Processes	3
CHEM ENG 3034 Kinetics & Reactor Design	3
CHEM ENG 3035 Multi-Phase Fluid & Particle Mechanics.....	3
CHEM ENG 3036 Unit Operations Laboratory	3
CHEM ENG 4050 Advanced Chemical Engineering	3
CHEM ENG 4056 Research Practice.....	3
CHEM ENG 4014 Plant Design Project.....	6
COMP SCI 1201 Introduction to Programming for Engineers	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2104 Numerical Methods II	3
PETROENG 1005 Introduction to Petroleum Geosciences & the Oil Industry	3
PETROENG 1006 Introduction to Petroleum Engineering	3
PETROENG 2009 Formation Evaluation, Petrophysics & Rock Properties	3
PETROENG 2010 Drilling Engineering.....	3
PETROENG 3001 Reservoir Simulation	3
PETROENG 3005 Reservoir Characterisation & Modelling	3
PETROENG 3020 Production Engineering.....	3
PETROENG 3025 Reservoir Engineering	3
PETROENG 4022 Integrated Field Development & Economics Project.....	3
PETROENG 4027 Decision Making & Risk Analysis	3

PETROENG 4034 Petroleum Business & Project Economics.....	3
PETROENG 4035 Reservoirs, Resources & Reserves	3
PETROENG 4037 Unconventional Resources and Recovery.....	3
PETROENG 4004A/B Petroleum Engineering Honours Project Part 1 & 2.....	6
CHEM 1100 Chemistry IA.....	3
CHEM 1200 Chemistry IB.....	3

2.1.2 Electives

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

Petroleum Engineering

PETROENG 3007 Well Testing & Pressure Transient Analysis.....	3
PETROENG 3019 Structural Geology & Seismic Methods.....	3
PETROENG 3023 Well Completion & Simulation	3
PETROENG 3026 Formation Damage & Productivity Enhancement	3
PETROENG 4033 Integrated Reservoir & Project Management.....	3

Chemical Engineering

CHEM ENG 4032 Composite & Multiphase Polymers	3
CHEM ENG 4052 Food Process Engineering.....	3
CHEM ENG 4053 Pinch Analysis & Process Synthesis.....	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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 and Chemical):

MATHS 1013 Mathematics IM.....	3
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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.

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

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
C&ENVENG 1009 Civil & Environmental Engineering IA.....	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
C&ENVENG 2025 Strength of Materials IIA.....	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
C&ENVENG 2072 Structural Engineering Design	3
C&ENVENG 3001 Structural Mechanics IIIA.....	3
C&ENVENG 3005 Structural Design III (Concrete).....	3
C&ENVENG 3007 Structural Design III (Steel)	3
C&ENVENG 3012 Geotechnical Engineering Design III	3
C&ENVENG 3077 Engineering Hydrology.....	3
C&ENVENG 3079 Water Engineering & Design III S2.....	3
C&ENVENG 4034 Engineering Management IV	3
C&ENVENG 4222 Research Project (Part B): Civil.....	3
C&ENVENG 4223 Research Project (Part C): Civil.....	6
COMP SCI 1201 Introduction to Programming for Engineers	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2104 Numerical Methods II	3
PETROENG 1005 Introduction to Petroleum Geosciences & the Oil Industry	3
PETROENG 1006 Introduction to Petroleum Engineering	3
PETROENG 2005 Sedimentology & Stratigraphy.....	3
PETROENG 2009 Formation Evaluation, Petrophysics & Rock Properties	3
PETROENG 2010 Drilling Engineering	3

PETROENG 3019 Structural Geology & Seismic Methods.....	3
PETROENG 3020 Production Engineering.....	3
PETROENG 3025 Reservoir Engineering.....	3
PETROENG 3026 Formation Damage & Productivity Enhancement	3
PETROENG 4022 Integrated Field Development & Economics Project.....	3
PETROENG 4027 Decision Making & Risk Analysis	3
PETROENG 4034 Petroleum Business & Project Economics.....	3
PETROENG 4035 Reservoirs, Resources & Reserves	3
PETROENG 4004A/B Petroleum Engineering Design Project Part 1 & 2	6

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
C&ENVENG 4069 Advanced Reinforced Concrete.....	3
C&ENVENG 4070 Seismic Design of Masonry Buildings.....	3
C&ENVENG 4073 Water Distribution Systems & Design.....	3
C&ENVENG 4075 Water Resources Optimisations & Modelling	3
C&ENVENG 4077 Coastal Engineering & Design.....	3
C&ENVENG 4085 Traffic Engineering & Design	3
C&ENVENG 4092 Wastewater Engineering & Design.....	3
C&ENVENG 4096 FRP Retrofitting of Concrete Structures.....	3
C&ENVENG 4097 Analysis of Rivers & Sediment Transport	3
C&ENVENG 4099 Structural Response to Blast Loading	3
C&ENVENG 4106 Introduction to Geostatistics	3
C&ENVENG 4107 Prestressed Concrete Structures.....	3
C&ENVENG 4091 Waste Management Analysis & Design	3

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
PETROENG 3005 Reservoir Characterisation & Modelling	3
PETROENG 3007 Well Testing & Pressure Transient Analysis	3
PETROENG 3023 Well Completion & Simulation	3
PETROENG 4037 Unconventional Resources & Recovery.....	3
PETROENG 4033 Integrated Reservoir & Project Management.....	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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
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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.

Bachelor of Engineering (Honours) (Petroleum and Mechanical) (BE(Hons)(Petrol Mech))

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 mechanical 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 mechanical engineering program has a strong focus on design with a design and build project in second year followed by a more advanced project in third year and a large design / research project in the final year. This program provides a core understanding of mechanical disciplines and problem solving skills.

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) / Bachelor of Engineering (Honours) (Mechanical) 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 and Mechanical)

There shall be a Bachelor of Engineering (Honours) (Petroleum and Mechanical).

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Petroleum and Mechanical), 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 1010 Engineering Mechanics - Statics	3
CHEM ENG 1009 Materials I	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2104 Numerical Methods II	3
MECH ENG 1006 Design Graphics & Communication	3
MECH ENG 1007 Engineering Mechanics - Dynamics	3
MECH ENG 2002 Stress Analysis & Design	3
MECH ENG 2021 Thermo-Fluids I.....	3
MECH ENG 2100 Design Practice	3
MECH ENG 2019 Dynamics & Control I.....	3
MECH ENG 2020 Materials & Manufacturing	3
MECH ENG 3027 Engineering Systems Design & Communication.....	3
MECH ENG 3030 Structural Design & Solid Mechanics.....	3
MECH ENG 3102 Heat Transfer & Thermodynamics.....	3
MECH ENG 3105 Sustainability & the Environment.....	3
MECH ENG 3028 Dynamics & Control II.....	3
PETROENG 1005 Introduction to Petroleum Geosciences & the Oil Industry	3
PETROENG 1006 Introduction to Petroleum Engineering	3
PETROENG 2005 Sedimentology & Stratigraphy.....	3
PETROENG 2009 Formation Evaluation, Petrophysics & Rock Properties	3
PETROENG 2010 Drilling Engineering.....	3

PETROENG 3020 Production Engineering.....	3
PETROENG 3023 Well Completion & Stimulation	3
PETROENG 3025 Reservoir Engineering.....	3
PETROENG 4022 Integrated Field Development & Economics Project.....	3
PETROENG 4027 Decision Making & Risk Analysis	3
PETROENG 4034 Petroleum Business & Project Economics.....	3
MECH ENG 4143A/B Mechanical Honours Project Level IV	9
PETROENG 4004A/B Petroleum Engineering Honours Project Part 1 & 2.....	6

PETROENG 3019 Structural Geology & Seismic Methods.....	3
PETRO ENG 3026 Formation Damage & Productivity Enhancement	3
PETROENG 4037 Unconventional Resources & Recovery	3
PETROENG 4033 Integrated Reservoir & Project Management.....	3
PETROENG 4035 Reservoirs, Resources & Reserves	3
^ 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.	

2.1.2 Electives

Courses to the value of 15 units including Mechanical Engineering electives to the value of 6 units and Petroleum Engineering electives to the value of 9 units from the following:

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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Mechanical Engineering

MECH ENG 4102 Advanced PID Control.....	3
MECH ENG 4103 Advanced Computer Aided Engineering	3
MECH ENG 4104 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 4105 Advanced Vibrations	3
MECH ENG 4107 Airconditioning	3
MECH ENG 4111 CFD for Engineering Applications	3
MECH ENG 4112 Combustion Technology & Emission Control	3
MECH ENG 4114 Corrosion: Principles & Prevention.....	3
MECH ENG 4115 Engineering Acoustics	3
MECH ENG 4117 Finance for Engineers	3
MECH ENG 4118 Finite Element Analysis of Structures	3
MECH ENG 4120 Fracture Mechanics.....	3
MECH ENG 4121 Materials Selection & Failure Analysis	3
MECH ENG 4124 Robotics M.....	3
MECH ENG 4125 Stresses in Plates & Shells.....	3
MECH ENG 4127 Wind Engineering.....	3

Petroleum Engineering

PETROENG 3001 Reservoir Simulation	3
PETROENG 3005 Reservoir Characterisation & Modelling	3
PETROENG 3007 Well Testing & Pressure Transient Analysis	3

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 and Mechanical):

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Petroleum and Mining) (BE(Hons)(Petrol Mining))

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 mining 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 mining program focuses on analysis and design and combines knowledge from geotechnical, environmental, structural and water engineering, geology, computing, mathematics and finance.

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 and Mining) 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 and Mining)

There shall be a Bachelor of Engineering (Honours) (Petroleum and Mining).

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Petroleum and Mining), 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 2025 Strength of Materials IIA	3
C&ENVENG 2069 Geotechnical Engineering IIA.....	3
C&ENVENG 2071 Water Engineering IIA	3
CHEM ENG 1007 Introduction to Process Engineering.....	3
COMP SCI 1201 Introduction to Programming for Engineers	3
C&ENVENG 1010 Engineering Mechanics - Statics	3
GEOLOGY 2504 Economic & Mine Geology II.....	3
MINING 1011 Introduction to Mining Engineering IA.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2104 Numerical Methods II	3
MATHS 2201 Engineering Mathematics IIA.....	3
MINING 3068 Mine Ventilation.....	3
MINING 3069 Rock Breakage	3
MINING 3070 Resource Estimation.....	3
MINING 3071 Mining Systems	3
MINING 3072 Mining Geomechanics.....	3
MINING 3073 Mine Planning	3
MINING 4101 Mine Management.....	3
MINING 4102 Mine Geotechnical Engineering.....	3
MINING 4106 Hard Rock Mine Design & Feasibility	3
MINING 4111 Coal Mine Design & Feasibility	3
PETROENG 1005 Introduction to Petroleum Geosciences & the Oil Industry	3
PETROENG 1006 Introduction to Petroleum Engineering.....	3
PETROENG 2009 Formation Evaluation, Petrophysics & Rock Properties	3
PETROENG 2010 Drilling Engineering.....	3
PETROENG 3001 Reservoir Simulation	3
PETROENG 3005 Reservoir Characterisation & Modelling	3
PETROENG 3007 Well Testing & Pressure Transient Analysis.....	3
PETROENG 3019 Structural Geology & Seismic Methods.....	3

PETROENG 3020 Production Engineering.....	3
PETROENG 3025 Reservoir Engineering.....	3
PETROENG 4022 Integrated Field Development & Economics Project.....	3
PETROENG 4027 Decision Making & Risk Analysis	3
PETROENG 4033 Integrated Reservoir & Project Management	3
PETROENG 4034 Petroleum Business & Project Economics.....	3
PETROENG 4035 Reservoir, Resources & Reserves	3
PETROENG 4037 Unconventional Resources & Recovery.....	3
PETROENG 4004A/B Petroleum Engineering Honours Project Part 1 & 2.....	6

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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.

2.1.2 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 and Mining):

MATHS 1013 Mathematics IM.....	3
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2.1.3 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Petroleum) / Bachelor of Science (BE(Hons)(Petrol) BSc)

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 science. 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. In addition to engineering studies, students undertake courses in geology, geophysics and applied geology.

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) / Bachelor of Science 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) / Bachelor of Science

There shall be a Bachelor of Engineering (Honours) (Petroleum) / Bachelor of Science.

2. Qualification Requirements

2.1 Academic Program

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

2.1.1 Core Courses

C&ENVENG 1010 Engineering Mechanics - Statics	3
CHEM ENG 1007 Introduction to Process Engineering.....	3
COMP SCI 1201 Introduction to Programming for Engineers	3
GEOLOGY 1100 Earth's Interior I	3
GEOLOGY 1103 Earth Systems	3
GEOLOGY 2501 Structural Geology II.....	3
GEOLOGY 2502 Igneous and Metamorphic Geology II.....	3
GEOLOGY 2505 Geochemistry II	3
GEOLOGY 3008 Geophysics III	3
GEOLOGY 3013 Tectonics III.....	3
GEOLOGY 3016 Igneous and Metamorphic Geology III.....	3
GEOLOGY 3019 Field Geoscience Program III.....	3
GEOLOGY 3500 Exploration Methods III.....	3
GEOLOGY 3502 Mineral and Energy Resources III	3
GEOLOGY 3504 Basins, Sediments and Regolith III	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
PETROENG 1005 Introduction to Petroleum Geosciences & the Oil Industry	3
PETROENG 1006 Introduction to Petroleum Engineering	3
PETROENG 2001 Reservoir Thermodynamics & Fluid Properties	3
PETROENG 2005 Sedimentology & Stratigraphy.....	3
PETROENG 2009 Formation Evaluation, Petrophysics & Rock Properties	3
PETROENG 2010 Drilling Engineering.....	3
PETROENG 3005 Reservoir Characterisation & Modelling	3
PETROENG 3019 Structural Geology & Seismic Methods.....	3
PETROENG 3020 Production Engineering.....	3
PETROENG 3025 Reservoir Engineering.....	3
PETROENG 3026 Formation Damage & Productivity Enhancement	3

PETROENG 4004A/B Petroleum Engineering Honours Project Part 1 & 2.....	6
PETROENG 4022 Integrated Field Development & Economics Project.....	3
PETROENG 4027 Decision Making & Risk Analysis	3
PETROENG 4034 Petroleum Business & Project Economics.....	3
PETROENG 4035 Reservoirs, Resources & Reserves	3
PHYSICS 1100 Physics IA.....	3
SOIL&WAT 3010 Remote Sensing III	3

2.1.2 Electives

Courses to the value of 6 units from Petroleum Engineering electives:

Petroleum Engineering

PETROENG 3001 Reservoir Simulation	3
PETROENG 3007 Well Testing & Pressure Transient Analysis	3
PETROENG 3023 Well Completion & Stimulation	3
PETROENG 4033 Integrated Reservoir & Project Management.....	3
PETROENG 4037 Unconventional Resources & Recovery	3

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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) / Bachelor of Science:

MATHS 1013 Mathematics IM.....	3
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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.

Bachelor of Engineering (Honours) (Software) (BE(Hons)(Soft))

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

Overview

This program provides study of both the theory and practice of engineering principles while providing students with a choice of electives, allowing them to follow special interests in computing hardware and software. Emphasis is placed on understanding and mastering the underlying principles and techniques of software engineering so that graduates will be able to learn and apply new technologies as they emerge in the future. The early years of the program build a scientific and engineering foundation of computing, mathematics and digital electronics, in preparation for the more specialised software engineering courses. The third and fourth years have a strong emphasis on group software development projects with close industrial connections.

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 Australian Computer Society (ACS) the Institute of Electrical and Electronic Engineers (IEEE) and the American-based Association for Computing Machinery (ACM).

The Bachelor of Engineering (Honours) (Software) is an AQF Level 8 qualification with a standard full-time duration of 4 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) (Software)

There shall be a Bachelor of Engineering (Honours) (Software).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Software), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

C&ENVENG 4034 Engineering Management IV	3
COMP SCI 1102 Object Oriented Programming	3
COMP SCI 1103 Algorithm Design & Data Structures.....	3
COMP SCI 1105 Web & Database Computing	3
COMP SCI 2000 Computer Systems	3
COMP SCI 2201 Algorithm & Data Structure Analysis	3
COMP SCI 2203 Problem Solving & Software Development	3
COMP SCI 2005 Systems Programming	3
COMP SCI 2006 Introduction to Software Engineering	3
COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
COMP SCI 3013 Event Driven Computing.....	3
COMP SCI 3017 Software Engineering Group Project I - Part A	3
COMP SCI 3018 Software Engineering Group Project I - Part B	3
COMP SCI 4023 Software Process Improvement	3
COMP SCI 4014A/B Software Engineering Honours Research Project A/B	9
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
STATS 1000 Statistical Practice I.....	3

2.1.2 Electives

Courses to the value of 21 units from the following:

Level II

Elective courses to the value of 9 units from non-project Level II courses in the Faculty of Engineering, Computer and Mathematical Sciences.

Level III

Elective courses to the value of at least 6 units from non-project Level III courses in the Faculty of Engineering, Computer and Mathematical Sciences.

Level IV

Elective courses to the value of at least 6 units from non-project Level III courses in the Faculty of Engineering, Computer and Mathematical Sciences.

Engineering Communication

ENG 3003 Engineering Communication
EAL ^ 3

^ 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 96 units for the Bachelor of Engineering (Honours):

MATHS 1013 Mathematics IM..... 3

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.

Bachelor of Engineering (Honours) (Telecommunications) (BE(Hons)(Tel))

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

Overview

The program develops an understanding of telecommunications systems encompassing both hardware and software. Emphasis is placed on underlying principles and techniques so that graduates will be able to learn and apply new technologies as they emerge in the future. The early years of the program build a scientific and engineering foundation of computing, electronics, physics and mathematics. The more specialised telecommunications engineering courses offered in the later years include telecommunications systems modelling, computer networks, voice telecommunications and emerging technologies including 3G video phones, high speed domestic broadband and network security. A major component of the final year of the course is a specialised telecommunications project.

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 and the Australian Computer Society (ACS).

The Bachelor of Engineering (Honours) (Telecommunications) is an AQF Level 8 qualification with a standard full-time duration of 4 years.

1. Academic Program Rules for Bachelor of Engineering (Honours) (Telecommunications)

There shall be a Bachelor of Engineering (Honours) (Telecommunications).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Engineering (Honours) (Telecommunications), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 96 units:

2.1.1 Core Courses

APP MTH 3016 Random Processes III.....	3
COMP SCI 1201 Introduction to Programming for Engineers	3

COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
COMP SCI 3001 Computer Networks & Applications	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3024 Project Management for Electrical Engineering	3
ELEC ENG 3027 Control	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 4054 Telecommunications Systems	3
ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4063 Communications.....	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA....	3
MATHS 2202 Engineering Mathematics IIB....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9

2.1.2 Electives

Courses to the value of 3 units from the following:

COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
COMP SCI 3006 Software Engineering & Project	3

ELEC ENG 4052 Special Studies in EEE	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4067 Antennas & Propagation.....	3
ENG 3003 Engineering Communication	
EAL ^	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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 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.

2.1.4 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.

Bachelor of Engineering (Honours) (Telecommunications) / Bachelor of Arts (BE(Hons)(Tel) BA)

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 telecommunications engineering with arts. The telecommunications program develops an understanding of telecommunications systems encompassing both hardware and software. Emphasis is placed on underlying principles and techniques so that graduates will be able to learn and apply new technologies as they emerge in the future. In the arts program, students are able to specialise in areas of their choice by taking a 'major' (from one of 25 areas) and potentially a 'minor' (from a range of areas).

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) (Telecommunications) / Bachelor of Arts 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) (Telecommunications) / Bachelor of Arts

There shall be a Bachelor of Engineering (Honours) (Telecommunications) / Bachelor of Arts.

2. Qualification Requirements

2.1 Academic Program

To qualify for the combined degree of Bachelor of Engineering (Honours) (Telecommunications) / Bachelor of Arts, the student must complete satisfactorily a

program of study consisting of the following requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 90 units from the Bachelor of Engineering (Honours) (Telecommunications);

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

APP MTH 3016 Random Processes III.....	3
COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
COMP SCI 3001 Computer Networks & Applications	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3024 Project Management for Electrical Engineering.....	3
ELEC ENG 3027 Control.....	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing III.....	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 4054 Telecommunications Systems	3
ELEC ENG 4063 Communications.....	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3

MATHS 2202 Engineering Mathematics IIB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9

Engineering Communication

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 Bachelor of Arts Courses

Courses to the value of 30 units, including a major from the Bachelor of Arts. The core course ARTS 1007 The Enquiring Mind: Arts of Engagement must be completed as part of the Bachelor of Arts requirements. Consult the Academic Program Rules for the degree of Bachelor of Arts.

2.1.4 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) / Bachelor of Arts:
MATHS 1013 Mathematics IM..... 3

2.1.5 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.

2.1.6 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.

Bachelor of Engineering (Honours) (Telecommunications) / Bachelor of Finance (BE(Hons)(Tel) BFin)

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

Overview

Through this double degree program students can combine the concepts of telecommunications engineering with finance. The telecommunications program develops an understanding of telecommunications systems encompassing both hardware and software. Emphasis is placed on underlying principles and techniques so that graduates will be able to learn and apply new technologies as they emerge in the future. The finance program introduces students to the global and institutional aspects of our financial systems.

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) (Telecommunications) / Bachelor of Finance 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) (Telecommunications) / Bachelor of Finance

There shall be a Bachelor of Engineering (Honours) (Telecommunications) / Bachelor of Finance.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Telecommunications) / Bachelor of Finance, the student must complete satisfactorily a program of study consisting of the following

requirements with a combined total of not less than 120 units, comprising:

Courses to the value of 84 units from the Bachelor of Engineering (Honours) (Telecommunications);

Courses to the value of 36 units from the Bachelor of Finance.

2.1.1 Bachelor of Engineering (Honours) - Core Courses

APP MTH 3016 Random Processes III.....	3
COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
COMP SCI 3001 Computer Networks & Applications	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3024 Project Management for Electrical Engineering.....	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 4054 Telecommunications Systems	3
ELEC ENG 4063 Communications.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9

Engineering Communication

ENG 3003 Engineering Communication
EAL ^ 3

^ 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.

2.1.5 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.

2.1.2 Bachelor of Finance Courses

ACCTING 1002 Accounting for Decision
Makers I 3

CORPFIN 2500 Business Finance II 3

CORPFIN 2501 Financial Institutions
Management II..... 3

CORPFIN 3501 Portfolio Theory &
Management III..... 3

ECON 1000 Principles of
Macroeconomics I..... 3

ECON 1004 Principles of
Microeconomics I..... 3

ECON 1009 International Financial
Institutions & Markets I..... 3

ECON 2504 Intermediate Econometrics II..... 3

Courses to the value of 3 units from the
following:

CORPFIN 2502 Business Valuation II..... 3

ECON 2508 Financial Economics II..... 3

plus

Courses to the value of 3 units from the
following:

CORPFIN 3502 Options, Futures & Risk
Management III..... 3

MATHS 3012 Financial Modelling: Tools &
Techniques III 3

plus

Level III Finance courses to the value of 6
units.

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) / Bachelor of Finance:

MATHS 1013 Mathematics IM..... 3

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.

Bachelor of Engineering (Honours) (Telecommunications) / Bachelor of Mathematical and Computer Sciences (BE(Hons)(Tel) BMaCompSc)

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

Overview

Through this double degree program students can combine the concepts of telecommunications engineering with mathematical and computer sciences. The telecommunications program develops an understanding of telecommunications systems encompassing both hardware and software. Emphasis is placed on underlying principles and techniques so that graduates will be able to learn and apply new technologies as they emerge in the future. The mathematical and computer sciences program includes a range of mathematics, statistics and computer science courses.

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) (Telecommunications) / Bachelor of Mathematical and Computer Sciences 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) (Telecommunications) / Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Engineering (Honours) (Telecommunications) / Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the double degree of Bachelor of Engineering (Honours) (Telecommunications) / Bachelor of Mathematical and Computer Sciences, with a Mathematics major, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 120 units:

Courses to the value of 96 units from the Bachelor of Engineering (Honours) (Telecommunications);

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences.

2.1.1 Computer Science Major

Bachelor of Engineering (Honours) - Core Courses

APP MTH 3016 Random Processes III.....	3
COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
COMP SCI 3001 Computer Networks & Applications	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3024 Project Management for Electrical Engineering	3
ELEC ENG 3027 Control	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3034 Telecommunications Principles.....	3

ELEC ENG 4054 Telecommunications Systems	3
ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4063 Communications	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9

Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4067 Antennas & Propagation.....	3
ENG 3003 Engineering Communication EAL ^	3
PURE MTH 3018 Coding & Cryptology III	3

^ 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.

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major in Computer Science. The 24 units must consist of Level II and III Mathematical and Computer Sciences courses, with a minimum of 12 units at Level III.

2.1.2 Mathematics Major

Bachelor of Engineering (Honours) - Core Courses

APP MTH 3016 Random Processes III.....	3
COMP SCI 1201 Introduction to Programming for Engineers	3
COMP SCI 1202 Object-Oriented Programming for Engineers	3
COMP SCI 2103 Algorithm Design & Data Structures for Engineers.....	3
COMP SCI 2000 Computer Systems	3
COMP SCI 3001 Computer Networks & Applications	3

ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3
ELEC ENG 1010 Electrical & Electronic Engineering IB.....	3
ELEC ENG 2007 Signals & Systems.....	3
ELEC ENG 2008 Electronics.....	3
ELEC ENG 2009 Engineering Electromagnetics.....	3
ELEC ENG 2011 Circuit Analysis.....	3
ELEC ENG 3018 RF Engineering.....	3
ELEC ENG 3024 Project Management for Electrical Engineering	3
ELEC ENG 3027 Control	3
ELEC ENG 3028 Digital Systems	3
ELEC ENG 3033 Signal Processing.....	3
ELEC ENG 3034 Telecommunications Principles.....	3
ELEC ENG 4054 Telecommunications Systems	3
ELEC ENG 4055 System Engineering Management	3
ELEC ENG 4063 Communications.....	3
ELEC ENG 4064 Business Management Systems	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
MATHS 2201 Engineering Mathematics IIA.....	3
MATHS 2202 Engineering Mathematics IIB.....	3
PHYSICS 1100 Physics IA.....	3
PHYSICS 1200 Physics IB.....	3
ELEC ENG 4068A/B Honours Project Part 1 & 2	9

Engineering Communication

ENG 3003 Engineering Communication EAL ^	3
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^ 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.

Bachelor of Engineering (Honours) - Electives

Courses to the value of 3 units from the following:

COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
COMP SCI 3006 Software Engineering & Project	3
ELEC ENG 4056 Real Time Systems	3
ELEC ENG 4057 RF Systems	3
ELEC ENG 4061 Image Processing	3
ELEC ENG 4067 Antennas & Propagation.....	3
PURE MTH 3018 Coding & Cryptology III	3

Bachelor of Mathematical and Computer Sciences Requirements

Courses to the value of 24 units from the Bachelor of Mathematical and Computer Sciences, including a major or double major in Mathematics. The 24 units must consist of Level II and III Mathematical and Computer Sciences courses, with a minimum of 12 units at Level III.

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) / Bachelor of Mathematical and Computer Sciences:

MATHS 1013 Mathematics IM..... 3

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.

Bachelor of Mathematical Sciences (BMAsc)

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

Overview

This program is designed for those seeking a high level of mathematical and statistical training. The program provides a foundation in mathematics and statistics. Students also have the option of majoring in pure mathematics, applied mathematics or statistics. Applied mathematics courses cover topics that aim to achieve a balance between mathematical theories and practical applications of mathematics in the world around us. Pure mathematics courses are fundamental to applied mathematics, statistics, computer science, mathematical physics and many other areas of application and they also offer valuable training in rigour and logical thinking. Statistics courses provide the training to enable graduates to solve real-world problems by appropriately collecting, analysing and modelling data.

The Bachelor of Mathematical Sciences is an AQF Level 7 qualification with a standard full-time duration of 3 years.

1. Academic Program Rules for Bachelor of Mathematical Sciences

There shall be a Bachelor of Mathematical Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Mathematical Sciences, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 72 units.

Including core courses listed in Academic Program Rule 3.1 students must complete:

- Level I courses to the value of at least 18 units
- Level II courses to the value of at least 21 units
- Level III courses to the value of at least 24 units, with courses to the value of 18 units from any of the Applied Mathematics, Mathematical Sciences, Pure Mathematics and Statistics disciplines, which may also include the courses presented in a Mathematical Sciences major or double major, but not including MATHS 3015 Communications Skills III.

2.2 Majors and Double Majors

Students may also complete a major or double major.

Mathematical Sciences majors are available in:

Applied Mathematics
Pure Mathematics
Statistics

Mathematical Sciences double majors are available in:

Applied Mathematics and Pure Mathematics
Applied Mathematics and Statistics
Pure Mathematics and Applied Mathematics
Pure Mathematics and Statistics
Statistics and Applied Mathematics
Statistics and Pure Mathematics

3. Program of Study

3.1 Core Courses

COMP SCI 1012 Scientific Computing	3
MATHS 1008 Mathematics for Information Technology I.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
STATS 1005 Statistical Analysis & Modelling I.....	3
MATHS 2100 Real Analysis II	3
MATHS 2101 Multivariable & Complex Calculus II.....	3
MATHS 2102 Differential Equations II.....	3
MATHS 2103 Probability & Statistics II.....	3
MATHS 3015 Communication Skills III	3

3.2 Applied Mathematics

3.2.1 Applied Mathematics Courses

APP MTH 2105 Optimisation and Operations Research II.....	3
APP MTH 3001 Applied Probability III.....	3
APP MTH 3002 Fluid Mechanics III.....	3
APP MTH 3014 Optimisation III	3
APP MTH 3016 Random Processes III.....	3
APP MTH 3020 Stochastic Decision Theory III	3
APP MTH 3021 Modelling with Ordinary Differential Equations III	3

APP MTH 3022 Optimal Functions & Nanomechanics III 3
 APP MTH 3023 Partial Differential Equations & Waves III..... 3

3.2.2 Major in Applied Mathematics

A major comprising Level III Applied Mathematics courses to the value of at least 12 units from Academic Program Rule 3.2.1.

3.2.3 Double Major in Applied Mathematics and Pure Mathematics

A major comprising Level III Applied Mathematics courses to the value of at least 12 units from Academic Program Rule 3.2.1 plus

Level III Pure Mathematics courses to the value of at least 9 units from Academic Program Rule 3.4.1.

3.2.4 Double Major in Applied Mathematics and Statistics

A major comprising Level III Applied Mathematics courses to the value of at least 12 units from Academic Program Rule 3.2.1 plus

Level III Statistics courses to the value of at least 9 units from Academic Program Rule 3.5.1 which must include:

STATS 3001 Statistical Modelling III..... 3
 STATS 3006 Mathematical Statistics III..... 3

3.3 Mathematical Sciences

MATHS 2104 Numerical Methods 3
 MATHS 3012 Financial Modelling: Tools & Techniques III 3

3.4 Pure Mathematics

3.4.1 Pure Mathematics Courses

PURE MTH 2106 Algebra II 3
 PURE MTH 3002 Topology and Analysis III..... 3
 PURE MTH 3007 Groups and Rings III 3
 PURE MTH 3009 Integration and Analysis III 3
 PURE MTH 3019 Complex Analysis III..... 3
 PURE MTH 3023 Fields and Modules III..... 3

3.4.2 Major in Pure Mathematics

A major comprising Level III Pure Mathematics courses to the value of at least 12 units from Academic Program Rule 3.4.1.

3.4.3 Double Major in Pure Mathematics and Applied Mathematics

A major comprising Level III Pure Mathematics courses to the value of at least 12 units from Academic Program Rule 3.4.1 plus

Level III Applied Mathematics courses to the value of at least 9 units from Academic Program Rule 3.2.1.

3.4.4 Double Major in Pure Mathematics and Statistics

A major comprising Level III Pure Mathematics courses to the value of at least 12 units from Academic Program Rule 3.4.1

plus

Level III Statistics courses to the value of at least 9 units from Academic Program Rule 3.5.1 which must include:

STATS 3001 Statistical Modelling III..... 3
 STATS 3006 Mathematical Statistics III..... 3

3.5 Statistics

3.5.1 Statistics Courses

STATS 2107 Statistical Modelling and Inference II 3
 STATS 3001 Statistical Modelling III..... 3
 STATS 3005 Time Series III..... 3
 STATS 3006 Mathematical Statistics III..... 3
 APP MTH 3001 Applied Probability III..... 3
 APP MTH 3016 Random Processes III..... 3
 APP MTH 3020 Stochastic Decision Theory III 3

3.5.2 Major in Statistics

A major comprising Level III Statistics courses to the value of at least 12 units from Academic Program Rule 3.5.1 which must include:

STATS 3001 Statistical Modelling III..... 3
 STATS 3006 Mathematical Statistics III..... 3

3.5.3 Double Major in Statistics and Applied Mathematics

A major comprising Level III Statistics courses to the value of at least 12 units from Academic Program Rule 3.5.1 which must include:

STATS 3001 Statistical Modelling III..... 3
 STATS 3006 Mathematical Statistics III..... 3

plus

Level III Applied Mathematics courses to the value of at least 9 units from Academic Program Rule 3.2.1.

3.5.4 Double Major in Statistics and Pure Mathematics

A major comprising Level III Statistics courses to the value of at least 12 units from Academic Program Rule 3.5.1 which must include:

STATS 3001 Statistical Modelling III..... 3
 STATS 3006 Mathematical Statistics III..... 3

plus

Level III Pure Mathematics courses to the value of at least 9 units from Academic Program Rule 3.4.1.

3.6 Electives

Courses up to the value of 24 units from any of Academic Program Rules 3.2.1, 3.3, 3.4.1 or 3.5.1

or

other undergraduate courses offered by the University.

The following courses cannot be presented as electives:

ECON 1008 Business & Economic Statistics I

ECON 1010 Introduction to Mathematical Economics (Advanced) I

ECON 2503 Intermediate Mathematical Economics II

ECON 2504 Intermediate Econometrics II

ECON 2510 Economic Statistical Theory II

3.7 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.

Bachelor of Mathematical Sciences (Honours) (BMathSc(Hons))

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

Overview

The Bachelor of Mathematical Sciences (Honours) program is available to high performing students and allows for deeper mathematical knowledge in a chosen discipline. Honours is a one-year program of additional study taken after the completion of the Bachelor of Mathematical Sciences and is suitable preparation for students who wish to proceed to postgraduate studies. Honours degrees are highly regarded by employers as indicators of strong ability and creative thinking.

The Bachelor of Mathematical Sciences (Honours) is an AQF Level 8 qualification with a standard full-time duration of 1 year.

1 Academic Program Rules for Bachelor of Mathematical Sciences (Honours)

There shall be a Bachelor of Mathematical Sciences (Honours)

2 Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Mathematical Sciences (Honours) the student must complete satisfactorily a program of study consisting of courses to the value of 24 units from the following:

2.1.1 Core Courses

APP MTH 4015A/B Honours Applied Mathematics	24
MATHS 4000A/B Honours Mathematical Sciences	24
PURE MTH 4005A/B Honours Pure Mathematics	24
STATS 4000A/B Honours Statistics	24

2.1.2 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.

Bachelor of Mathematical Sciences (Advanced) (BMAsc(Adv))

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

Overview

The Bachelor of Mathematical Sciences (Advanced) is designed for high achieving students seeking mathematical and statistical training with a strong emphasis on research skill development. Students undertake a structured program of study that introduces the fundamentals of mathematics and statistics and leads to a specialisation in at least one of the major areas of applied mathematics, pure mathematics or statistics. Exposure to the research culture across the breadth of the mathematical sciences is developed through the courses Advanced Mathematical Perspectives I, Advanced Mathematical Perspectives II and Advanced Mathematical Perspectives III, which are specific to this program. Students in this program will have the early opportunity to engage with the academic and research culture within the School of Mathematical Sciences through participation in the School colloquium and seminar series. Students completing the Bachelor of Mathematical Sciences (Advanced) will be automatically eligible for entry to the Bachelor of Mathematical Sciences (Honours) program. Students enrolled in this program must maintain a GPA of 5.0 or will be required to transfer to the Bachelor of Mathematical Sciences.

The Bachelor of Mathematical Sciences (Advanced) is an AQF Level 7 qualification with a standard full-time duration of 3 years.

1. Academic Program Rules for Bachelor of Mathematical Sciences (Advanced)

There shall be a Bachelor of Mathematical Sciences (Advanced).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Mathematical Sciences (Advanced), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 72 units including:

- Core courses listed in Academic Program Rule 3.1
- Level I courses to the value of at least 18 units

- Level II courses to the value of at least 21 units
- Level III courses to the value of at least 24 units, with courses to the value of 18 units from any of the Applied Mathematics, Mathematical Sciences, Pure Mathematics and Statistics disciplines, which may also include the courses presented in a Mathematical Sciences major or double major
- Elective courses up to the value of 9 units.

2.2 Majors and Double Majors

Students may also complete at least one Mathematical Sciences or Mathematical Sciences double major

Mathematical Sciences majors are available in:

Applied Mathematics
Pure Mathematics
Statistics

Mathematical Sciences double majors are available in:

Applied Mathematics and Pure Mathematics
Applied Mathematics and Statistics
Pure Mathematics and Applied Mathematics
Pure Mathematics and Statistics
Statistics and Applied Mathematics
Statistics and Pure Mathematics

3. Program of study

3.1 Core Courses

COMP SCI 1012 Scientific Computing	3
MATHS 1008 Mathematics for Information Technology I.....	3
MATHS 1015 Advanced Mathematical Perspectives I.....	3
MATHS 1011 Mathematics IA.....	3
MATHS 1012 Mathematics IB.....	3
STATS 1005 Statistical Analysis & Modelling I.....	3
MATHS 2100 Real Analysis II	3
MATHS 2101 Multivariable & Complex Calculus II.....	3
MATHS 2102 Differential Equations II.....	3
MATHS 2103 Probability & Statistics II.....	3
MATHS 2203 Advanced Mathematical Perspectives II.....	3

MATHS 3020 Advanced Mathematical Perspectives III.....	3	PURE MTH 3009 Integration and Analysis III.....	3
3.2 Applied Mathematics		PURE MTH 3019 Complex Analysis III.....	3
3.2.1 Applied Mathematics Courses		PURE MTH 3023 Fields and Modules III.....	3
APP MTH 2105 Optimisation and Operations Research II.....	3	3.4.2 Major in Pure Mathematics	
APP MTH 3001 Applied Probability III.....	3	A major comprising Level III Pure Mathematics courses to the value of at least 12 units from Academic Program Rule 3.4.1.	
APP MTH 3002 Fluid Mechanics III.....	3	3.4.3 Double Major in Pure Mathematics and Applied Mathematics	
APP MTH 3014 Optimisation III.....	3	A major comprising Level III Pure Mathematics courses to the value of at least 12 units from Academic Program Rule 3.4.1	
APP MTH 3016 Random Processes III.....	3	plus	
APP MTH 3020 Stochastic Decision Theory III.....	3	Level III Applied Mathematics courses to the value of at least 9 units from Academic Program Rule 3.1.1.	
APP MTH 3021 Modelling with Ordinary Differential Equations III.....	3	3.4.4 Double Major in Pure Mathematics and Statistics	
APP MTH 3022 Optimal Functions & Nanomechanics III.....	3	A major comprising Level III Pure Mathematics courses to the value of at least 12 units from Academic Program Rule 3.4.1	
APP MTH 3023 Partial Differential Equations & Waves III.....	3	plus	
3.2.2 Major in Applied Mathematics		Level III Statistics courses to the value of at least 9 units from Academic Program Rule 3.5.1 which must include:	
A major comprising Level III Applied Mathematics courses to the value of at least 12 units from Academic Program Rule 3.2.1.		STATS 3001 Statistical Modelling III.....	3
3.2.3 Double Major in Applied Mathematics and Pure Mathematics		STATS 3006 Mathematical Statistics III.....	3
A major comprising Level III Applied Mathematics courses to the value of at least 12 units from Academic Program Rule 3.2.1		3.5 Statistics	
plus		3.5.1 Statistics Courses	
Level III Pure Mathematics courses to the value of at least 9 units from Academic Program Rule 3.4.1		STATS 2107 Statistical Modelling and Inference II.....	3
3.2.4 Double Major in Applied Mathematics and Statistics		STATS 3001 Statistical Modelling III.....	3
A major comprising Level III Applied Mathematics courses to the value of at least 12 units from Academic Program Rule 3.2.1		STATS 3005 Time Series III.....	3
plus		STATS 3006 Mathematical Statistics III.....	3
Level III Statistics courses to the value of at least 9 units from Academic Program Rule 3.5.1 which must include:		APP MTH 3001 Applied Probability III.....	3
STATS 3001 Statistical Modelling III.....	3	APP MTH 3016 Random Processes III.....	3
STATS 3006 Mathematical Statistics III.....	3	APP MTH 3020 Stochastic Decision Theory III.....	3
3.3 Mathematical Sciences		3.5.2 Major in Statistics	
MATHS 2104 Numerical Methods.....	3	Level III Statistics courses to the value of at least 12 units from Academic Program Rule 3.5.1 which must include:	
MATHS 3012 Financial Modelling: Tools & Techniques III.....	3	STATS 3001 Statistical Modelling III.....	3
3.4 Pure Mathematics		STATS 3006 Mathematical Statistics III.....	3
3.4.1 Pure Mathematics Courses		3.5.3 Double Major in Statistics and Applied Mathematics	
PURE MTH 2106 Algebra II.....	3	Level III Statistics courses to the value of at least 12 units from Academic Program Rule 3.5.1 which must include:	
PURE MTH 3002 Topology and Analysis III.....	3	STATS 3001 Statistical Modelling III.....	3
PURE MTH 3007 Groups and Rings III.....	3	STATS 3006 Mathematical Statistics III.....	3

plus

Level III Applied Mathematics courses to the value of at least 9 units from Academic Program Rule 3.1.1.

3.5.4 Double Major in Statistics and Pure Mathematics

Level III Statistics courses to the value of at least 12 units from Academic Program Rule 3.4.1 which must include:

STATS 3001 Statistical Modelling III..... 3

STATS 3006 Mathematical Statistics III..... 3

plus

Level III Pure Mathematics courses to the value of at least 9 units from Academic Program Rule 3.4.1.

3.6 Electives

Courses to the value of at least 15 units from any of Academic Program Rules 3.2.1, 3.3, 3.4.1 and 3.5.1

or

Other undergraduate courses offered by the University.

The following courses cannot be presented as electives:

ECON 1008 Business & Economic Statistics I

ECON 1010 Introduction to Mathematical Economics (Advanced) I

ECON 2503 Intermediate Mathematical Economics II

ECON 2504 Intermediate Econometrics II

ECON 2510 Economic Statistical Theory II

3.7 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.

Bachelor of Mathematical and Computer Sciences (BMaCompSc)

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

Overview

This program is designed for students who wish to study mathematics, statistics or computing. Those studies can be combined with courses from commerce, design studies, economics, engineering, finance, arts or sciences. Previous students have enrolled in courses as diverse as accounting, geology, anthropology, biotechnology, history, languages, music studies, philosophy, politics, pharmacology and psychology. Each student has an individual program that may be developed in consultation with a course advisor.

The Bachelor of Mathematical and Computer Sciences is an AQF Level 7 qualification with a standard full-time duration of 3 years.

1. Academic Program Rules for Bachelor of Mathematical and Computer Sciences

There shall be a Bachelor of Mathematical and Computer Sciences.

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Mathematical and Computer Sciences, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 72 units including:

- Level I courses to the value of at least 18 units
- Level II courses to the value of at least 21 units
- Level III courses to the value of at least 21 units
- Level II and III courses to the combined value of at least 45 units
- at least 36 units of Mathematical and Computer Science courses of which at least 12 units are at Level III.

2.2 Majors and Double Majors

Students may also complete a major or double major.

Mathematical and Computer Sciences majors are available in:

- Applied Mathematics
- Computer Science

Pure Mathematics

Statistics

Mathematical Sciences

Mathematical and Computer Sciences double majors are available in:

Applied Mathematics and Pure Mathematics

Applied Mathematics and Statistics

Pure Mathematics and Applied Mathematics

Pure Mathematics and Statistics

Statistics and Applied Mathematics

Statistics and Pure Mathematics

Other Majors

Majors from other Faculties are available, and students should consult with the relevant Faculty for further information.

3. Program of Study

3.1 Core Courses

COMP SCI 1012 Scientific Computing 3

MATHS 1011 Mathematics IA..... 3

MATHS 1012 Mathematics IB..... 3

MATHS 3015 Communication Skills III 3

Note: for the purposes of Academic Program Rule 2.1e MATHS 3015 Communication Skills III is considered to be a non-Mathematical and Computer Sciences course.

3.2 Applied Mathematics

3.2.1 Applied Mathematics Courses

APP MTH 2105 Optimisation and Operations Research II 3

APP MTH 3001 Applied Probability III..... 3

APP MTH 3002 Fluid Mechanics III..... 3

APP MTH 3014 Optimisation III 3

APP MTH 3016 Random Processes III..... 3

APP MTH 3020 Stochastic Decision Theory III 3

APP MTH 3021 Modelling with Ordinary Differential Equations III 3

APP MTH 3022 Optimal Functions & Nanomechanics 3

APP MTH 3023 Partial Differential Equations & Waves III 3

3.2.2 Major in Applied Mathematics

A major comprising Level III Applied Mathematics courses to the value of at least 12 units from Academic Program Rule 3.2.1.

3.2.3 **Double Major in Applied Mathematics and Pure Mathematics**

A major comprising Level III Applied Mathematics courses to the value of at least 12 units from Academic Program Rule 3.2.1 plus

Level III Pure Mathematics courses to the value of at least 9 units from Academic Program Rule 3.4.1.

3.2.4 **Double Major in Applied Mathematics and Statistics**

A major comprising Level III Applied Mathematics courses to the value of at least 12 units from Academic Program Rule 3.2.1 plus

Level III Statistics courses to the value of at least 9 units from Academic Program Rule 3.5.1 which must include:

STATS 3001 Statistical Modelling III.....	3
STATS 3006 Mathematical Statistics III.....	3

3.3 **Computer Science**

3.3.1 **Computer Science Courses**

COMP SCI 1105 Web & Database Computing	3
COMP SCI 1010 Puzzle Based Learning	3
COMP SCI 1101 Introduction to Programming	3
COMP SCI 1102 Object Oriented Programming	3
COMP SCI 1103 Algorithm Design & Data Structures.....	3
COMP SCI 2000 Computer Systems	3
COMP SCI 2005 Systems Programming	3
COMP SCI 2006 Introduction to Software Engineering	3
COMP SCI 2201 Algorithm & Data Structure Analysis	3
COMP SCI 3001 Computer Networks & Applications	3
COMP SCI 3004 Operating Systems	3
COMP SCI 3005 Computer Architecture	3
COMP SCI 3006 Software Engineering & Project	3
COMP SCI 3007 Artificial Intelligence.....	3
COMP SCI 3009 Advanced Programming Paradigms	3
COMP SCI 3012 Distributed Systems	3
COMP SCI 3013 Event Driven Computing.....	3
COMP SCI 3014 Computer Graphics.....	3
COMP SCI 3301 Advanced Algorithms	3

3.3.2 **Major in Computer Science**

A major comprising Computer Science courses to the value of 24 units with at least 12 units at Level III from Academic Program Rule 3.3.1 which must include:

COMP SCI 2000 Computer Systems	3
COMP SCI 2201 Algorithm & Data Structure Analysis	3
COMP SCI 3006 Software Engineering & Project	3

3.4 **Pure Mathematics**

3.4.1 **Pure Mathematics Courses**

PURE MTH 2106 Algebra II	3
PURE MTH 3002 Topology and Analysis III.....	3
PURE MTH 3007 Groups and Rings III	3
PURE MTH 3009 Integration and Analysis III	3
PURE MTH 3019 Complex Analysis III.....	3
PURE MTH 3023 Fields and Modules III.....	3

3.4.2 **Major in Pure Mathematics**

A major comprising Level III Pure Mathematics courses to the value of at least 12 units from Academic Program Rule 3.4.1.

3.4.3 **Double Major in Pure Mathematics and Applied Mathematics**

A major comprising Level III Pure Mathematics courses to the value of at least 12 units from Academic Program Rule 3.4.1

plus

Level III Applied Mathematics courses to the value of at least 9 units from Academic Program Rule 3.2.1.

3.4.4 **Double Major in Pure Mathematics and Statistics**

A major comprising Level III Pure Mathematics courses to the value of at least 12 units from Academic Program Rule 3.4.1

plus

Level III Statistics courses to the value of at least 9 units from Academic Program Rule 3.5.1 which must include:

STATS 3001 Statistical Modelling III.....	3
STATS 3006 Mathematical Statistics III.....	3

3.5 **Statistics**

3.5.1 **Statistics Courses**

STATS 1005 Statistical Analysis and Modelling I	3
STATS 2107 Statistical Modelling and Inference II	3
STATS 3001 Statistical Modelling III.....	3
STATS 3005 Time Series III	3
STATS 3006 Mathematical Statistics III.....	3

APP MTH 3001 Applied Probability III.....	3
APP MTH 3016 Random Processes III.....	3
APP MTH 3020 Stochastic Decision Theory III	3

3.5.2 **Major in Statistics**

A major comprising Level III Statistics courses to the value of at least 12 units from Academic Program Rule 3.5.1 which must include:

STATS 3001 Statistical Modelling III.....	3
STATS 3006 Mathematical Statistics III.....	3

3.5.3 **Double Major in Statistics and Applied Mathematics**

A major comprising Level III Statistics courses to the value of at least 12 units from Academic Program Rule 3.5.1 which must include:

STATS 3001 Statistical Modelling III.....	3
STATS 3006 Mathematical Statistics III.....	3

plus

Level III Applied Mathematics courses to the value of at least 9 units from Academic Program Rule 3.2.1.

3.5.4 **Double Major in Statistics and Pure Mathematics**

A major comprising Level III Statistics courses to the value of at least 12 units from Academic Program Rule 3.5.1 which must include:

STATS 3001 Statistical Modelling III.....	3
STATS 3006 Mathematical Statistics III.....	3

plus

Level III Pure Mathematics courses to the value of at least 9 units from Academic Program Rule 3.4.1.

3.6 **Mathematical Sciences**

3.6.1 **Mathematical Sciences Courses**

MATHS 1008 Mathematics for Information Technology I.....	3
MATHS 1013 Mathematics IM.....	3
MATHS 2100 Real Analysis II	3
MATHS 2101 Multivariable & Complex Calculus II.....	3
MATHS 2102 Differential Equations II.....	3
MATHS 2103 Probability & Statistics II.....	3
MATHS 2104 Numerical Methods	3
MATHS 3012 Financial Modelling: Tools & Techniques III	3

3.6.2 **Major in Mathematical Sciences**

Students who do not otherwise qualify for a major in Applied Mathematics, Pure Mathematics or Statistics and who have successfully completed Level III courses offered across those Disciplines to the value of at least 12 units will qualify for the award of a major in Mathematical Sciences.

3.7 **Electives**

Courses to the value of 33 units from Academic Program Rules 3.2.1, 3.3.1, 3.4.1, 3.5.1 and 3.6.1

or

Other undergraduate courses offered by the University. A student may present no more than 12 units of courses offered at Level II by the Business School and the School of Economics.

The following courses cannot be presented as electives:

ECON 1008 Business and Economic Statistics I

ECON 1010 Introduction to Mathematical Economics (Advanced) I

ECON 2503 Intermediate Mathematical Economics II

ECON 2504 Intermediate Econometrics II

ECON 2510 Economic Statistical Theory II

3.8 **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.

Bachelor of Mathematical and Computer Sciences (Honours) (BMaCompSc(Hons))

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

Overview

The Bachelor of Mathematical and Computer Science (Honours) program is designed for high performing students who wish to undertake a one-year program of additional study after the completion of the Bachelor of Mathematical and Computer Sciences degree. The program provides a deeper understanding of a chosen specialisation in Pure Mathematics, Applied Mathematics, Statistics or Computer Science. Undertaking the Honours program demonstrates a commitment to further learning and is suitable preparation for students who wish to proceed to postgraduate studies.

The Bachelor of Mathematical and Computer Science (Honours) is an AQF Level 8 qualification with a standard full-time duration of 1 year.

1 Academic Program Rules for Bachelor of Mathematical and Computer Science (Honours)

There shall be a Bachelor of Mathematical and Computer Science (Honours)

2 Qualification Requirements

2.1 Academic Program

To qualify for the degree of Bachelor of Mathematical and Computer Science (Honours) the student must complete satisfactorily a program of study consisting of 24 units from the following:

2.1.1 Core Courses

APP MTH 4011A/B Honours Applied Mathematics and Computer Science	24
APP MTH 4015A/B Honours Applied Mathematics	24
APP MTH 4016A/B Honours Applied Mathematics and Genetics	24
APP MTH 4017A/B Honours Applied Mathematics and Statistics	24
APP MTH 4018A/B Honours Applied Mathematics and Environmental Biology	24
COMP SCI 4999A/B Honours Computer Science	24
MATHS 4000A/B Honours Mathematical Sciences	24

PURE MTH 4001A/B Honours Pure Mathematics and Statistics	24
PURE MTH 4003A/B Honours Pure and Applied Mathematics	24
PURE MTH 4004A/B Honours Computer Science and Pure Mathematics	24
PURE MTH 4005A/B Honours Pure Mathematics	24
STATS 4000A/B Honours Statistics	24
STATS 4003A/B Honours Statistics and Computer Science	24
STATS 4004A/B Honours Statistics and Genetics	24

2.1.2 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.

Postgraduate Program Rules

Graduate Certificate in Computer Science (GCertCompSc)

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

Overview

The Graduate Certificate in Computer Science is designed for students with little experience in computer science, and provides a basic understanding of how software and hardware can be combined to overcome a range of complex challenges. Graduates can seek employment within the information technology industry, including careers in scientific, entertainment, networking, software engineering and defence sectors.

The Graduate Certificate in Computer Science is an AQF Level 8 qualification with a standard full-time duration of 0.5 years.

1. Academic Program Rules for Graduate Certificate in Computer Science

There shall be a Graduate Certificate in Computer Science.

2. Qualification Requirements

2.1 Academic Program

To qualify for the Graduate Certificate in Computer Science, the student must complete satisfactorily a program of study consisting of the following requirements with not less than 12 units from any of the following:

2.1.1 Elective Courses

Foundation Electives

COMP SCI 7080 Computer Science Concepts.....	3
COMP SCI 7081 Computer Systems.....	3
COMP SCI 7082 Data Structures and Algorithms.....	3
COMP SCI 7083 Database and Information Systems.....	3
COMP SCI 7084 Introduction to Software Engineering.....	3
COMP SCI 7088 Systems Programming.....	3
COMP SCI 7202 Foundations of Computer Science.....	6
COMP SCI 7201 Algorithm and Data Structure Analysis.....	3
COMP SCI 7204 Advanced Programming Paradigms.....	3

General Electives

COMP SCI 7006 Programming Techniques.....	3
COMP SCI 7015 Software Engineering and Project.....	3
COMP SCI 7026 Computer Architecture.....	3
COMP SCI 7027 Computational Cognitive Science.....	3
COMP SCI 7039 Computer Networks and Applications.....	3
COMP SCI 7059 Artificial Intelligence.....	3
COMP SCI 7064 Operating Systems.....	3
COMP SCI 7076 Distributed Systems.....	3
COMP SCI 7089 Event Driven Computing.....	3
COMP SCI 7090 Computer Graphics.....	3
COMP SCI 7301 Advanced Algorithms.....	3

Advanced Electives

COMP SCI 7000 Software Architecture.....	3
COMP SCI 7005 Adaptive Business Intelligence.....	3
COMP SCI 7007 Specialised Programming....	3
COMP SCI 7009 Modern Heuristic Methods.....	3
COMP SCI 7010 Special Topics in Computer Science A.....	3
COMP SCI 7012 Special Topics in Computer Science B.....	3
COMP SCI 7022 Computer Vision.....	3
COMP SCI 7023 Software Process Improvement.....	3
COMP SCI 7036 Software Engineering in Industry.....	3
COMP SCI 7041 Language Translators.....	3
COMP SCI 7044 Computer System Security.....	3
COMP SCI 7045 Distributed High Performance Computing.....	3
COMP SCI 7054 High Integrity Software Engineering.....	3
COMP SCI 7077 Solving Engineering Models.....	3
COMP SCI 7091 Commercialising IT Research.....	3
COMP SCI 7092 Mobile and Wireless Networks.....	3
COMP SCI 7093 Evolutionary Computation....	3
COMP SCI 7094 Distributed Databases & Data Mining.....	3

COMP SCI 7401 Introduction to Statistical Machine Learning	3
COMP SCI 7402 Introduction to Geometric Algorithms.....	3
COMP SCI 7403 Mining Big Data	3

2.1.4 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.

Graduate Diploma in Computer Science (GDipCompSc)

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

Overview

The Graduate Diploma in Computer Science is designed for students with little experience in computer science and provides a fundamental understanding of how software and hardware can be combined to overcome a range of complex challenges. Graduates will have a demonstrated ability to design and construct large software systems. Employment may be sought within the information technology industry, including careers in scientific, entertainment, networking, software engineering and defence sectors.

The Graduate Diploma in Computer Science is an AQF Level 8 qualification with a standard full-time duration of 1 year.

1. Academic Program Rules for Graduate Diploma in Computer Science

There shall be a Graduate Diploma in Computer Science.

2. Qualification Requirements

2.1 Academic Program

To qualify for the Graduate Diploma in Computer Science, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 24 units:

2.1.1 Core Course

COMP SCI 7015 Software Engineering and Project 3

2.1.2 Electives

Courses to the value of 21 units comprising, courses to the value of at least 9 units from the following:

COMP SCI 7080 Computer Science Concepts 3
COMP SCI 7081 Computer Systems 3
COMP SCI 7082 Data Structures and Algorithms 3
COMP SCI 7083 Database and Information Systems 3
COMP SCI 7084 Introduction to Software Engineering 3
COMP SCI 7088 Systems Programming 3
COMP SCI 7202 Foundations of Computer Science 6

COMP SCI 7201 Algorithm and Data Structure Analysis 3
plus

Courses to the value of at least 9 units from the following:

COMP SCI 7006 Programming Techniques 3
COMP SCI 7026 Computer Architecture 3
COMP SCI 7204 Advanced Programming Paradigms 3
COMP SCI 7027 Computational Cognitive Science 3
COMP SCI 7039 Computer Networks and Applications 3
COMP SCI 7059 Artificial Intelligence 3
COMP SCI 7064 Operating Systems 3
COMP SCI 7076 Distributed Systems 3
COMP SCI 7089 Event Driven Computing 3
COMP SCI 7090 Computer Graphics 3
COMP SCI 7301 Advanced Algorithms 3

plus

any further courses required to complete 24 units from the following:

COMP SCI 7000 Software Architecture 3
COMP SCI 7005 Adaptive Business Intelligence 3
COMP SCI 7007 Specialised Programming 3
COMP SCI 7009 Modern Heuristic Methods 3
COMP SCI 7010 Special Topics in Computer Science A 3
COMP SCI 7012 Special Topics in Computer Science B 3
COMP SCI 7022 Computer Vision 3
COMP SCI 7023 Software Process Improvement 3
COMP SCI 7036 Software Engineering in Industry 3
COMP SCI 7041 Language Translators 3
COMP SCI 7044 Computer System Security 3
COMP SCI 7045 Distributed High Performance Computing 3
COMP SCI 7054 High Integrity Software Engineering 3
COMP SCI 7077 Solving Engineering Models 3
COMP SCI 7091 Commercialising IT Research 3

COMP SCI 7092 Mobile and Wireless Networks.....	3
COMP SCI 7093 Evolutionary Computation.....	3
COMP SCI 7094 Distributed Databases and Data Mining	3
COMP SCI 7401 Introduction to Statistical Machine Learning	3
COMP SCI 7402 Introduction to Geometric Algorithms.....	3
COMP SCI 7403 Mining Big Data	3

2.1.3 Engineering Communication

ELEC ENG 7057 Engineering Communication & Critical Thinking ^	3
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^ Unless exempted by the Faculty, all international students are required to take ELEC ENG 7057 Engineering Communication & Critical Thinking.

2.1.4 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.

Master of Computer Science (MCompSc)

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

Overview

Advanced technical studies in computer science provide an understanding of how software and hardware can be combined to overcome a range of complex challenges. This program has a major research component and high-performing graduates may also proceed to a PhD program.

The Master of Computer Science is an AQF Level 9 qualification with a standard full-time duration of 2 years.

1. Academic Program Rules for Master of Computer Science

There shall be a Master of Computer Science.

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Master of Computer Science, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 48 units of courses offered by the School of Computer Science:

2.1.1 Core Course

COMP SCI 7007 Specialised Programming 3

2.1.2 Electives

Courses to the value of at least 30 units from the following:

COMP SCI 7000 Software Architecture.....	3
COMP SCI 7005 Adaptive Business Intelligence.....	3
COMP SCI 7009 Modern Heuristic Methods.....	3
COMP SCI 7010 Special Topics in Computer Science A.....	3
COMP SCI 7012 Special Topics in Computer Science B.....	3
COMP SCI 7022 Computer Vision.....	3
COMP SCI 7023 Software Process Improvement.....	3
COMP SCI 7036 Software Engineering in Industry.....	3
COMP SCI 7041 Language Translators.....	3
COMP SCI 7044 Computer System Security.....	3

COMP SCI 7045 Distributed High Performance Computing.....	3
COMP SCI 7054 High Integrity Software Engineering.....	3
COMP SCI 7077 Solving Engineering Models.....	3
COMP SCI 7091 Commercialising IT Research.....	3
COMP SCI 7092 Mobile and Wireless Networks.....	3
COMP SCI 7093 Evolutionary Computation.....	3
COMP SCI 7094 Distributed Databases & Data Mining.....	3
COMP SCI 7401 Introduction to Statistical Machine Learning.....	3
COMP SCI 7402 Introduction to Geometric Algorithms.....	3
COMP SCI 7403 Mining Big Data.....	3

2.1.3 Engineering Communication

ELEC ENG 7057 Engineering Communication & Critical Thinking ^.....	3
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^ Unless exempted by the Faculty, all international students are required to take ELEC ENG 7057 Engineering Communication & Critical Thinking.

2.1.4 Research Project

Students must complete a research project:

COMP SCI 7095A Master of Computer Science Research Project Pt A.....	9
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plus

COMP SCI 7095B Master of Computer Science Research Project Pt B*.....	6
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*Students who are not selected for COMP SCI 7095B Master of Computer Science Research Project Pt B will instead be required to complete additional elective courses to the value of 9 units from Academic Program Rule 2.1.2.

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.

Master of Computing and Innovation (MComp&Innov)

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

Overview

The Master of Computing and Innovation is a conversion program designed for students who wish to develop new skills in the areas of Information and Communication Technology (ICT) and management and innovation. It is suitable for students with no prior experience in computer science as well as those with existing qualifications. In this program students undertake a variety of core and elective courses, designed to provide skills in ICT, management and innovation, as well as a significant project designed to combine skills developed across the program.

The Master of Computing and Innovation is an AQF Level 9 qualification with a standard full-time duration of 2 years.

1. Academic Program Rules for Master of Computing and Innovation

There shall be a Master of Computing and Innovation.

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Master of Computing and Innovation, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 48 units of courses offered by the School of Computer Science and the Entrepreneurship, Innovation and Commercialisation Centre:

2.1.1 Core Courses

COMP SCI 7202 Foundations of Computer Science.....	6
COMP SCI 7081 Computer Systems.....	3
COMP SCI 7201 Algorithm and Data Structure Analysis.....	3
COMP SCI 7015 Software Engineering and Project.....	3
plus	
Courses to the value of 6 units from the following:	
TECHCOMM 5016 Entrepreneurship and Innovation	3
TECHCOMM 5018 Opportunity Assessment.....	3

TECHCOMM 5021 Applied Project Management 1	3
TECHCOMM 7022 Creativity & Innovation.....	3

2.1.2 Electives

Courses to the value of 21 units comprising:

Courses to the value of at least 9 units but not more than 15 units from the following:

COMP SCI 7006 Programming Techniques.....	3
COMP SCI 7026 Computer Architecture.....	3
COMP SCI 7027 Computational Cognitive Science.....	3
COMP SCI 7039 Computer Networks & Applications	3
COMP SCI 7059 Artificial Intelligence.....	3
COMP SCI 7064 Operating Systems.....	3
COMP SCI 7076 Distributed Systems	3
COMP SCI 7089 Event Driven Computing.....	3
COMP SCI 7090 Computer Graphics.....	3
COMP SCI 7204 Advanced Programming Paradigms	3
COMP SCI 7301 Advanced Algorithms	3
plus	

any further courses required to complete 48 units from the following:

COMP SCI 7000 Software Architecture.....	3
COMP SCI 7005 Adaptive Business Intelligence.....	3
COMP SCI 7007 Specialised Programming.....	3
COMP SCI 7009 Modern Heuristic Methods.....	3
COMP SCI 7010 Special Topics in Computer Science A.....	3
COMP SCI 7012 Special Topics in Computer Science B	3
COMP SCI 7022 Computer Vision	3
COMP SCI 7023 Software Process Improvement	3
COMP SCI 7036 Software Engineering in Industry	3
COMP SCI 7041 Language Translators.....	3
COMP SCI 7044 Computer System Security	3
COMP SCI 7045 Distributed High Performance Computing	3
COMP SCI 7054 High Integrity Software Engineering.....	3
COMP SCI 7077 Solving Engineering Models	3

COMP SCI 7091 Commercialising IT Research	3	TECHCOMM 7027 Foresight & Social Change.....	3
COMP SCI 7092 Mobile and Wireless Networks.....	3	TECHCOMM 7028 Managing Strategy & Growth	3
COMP SCI 7093 Evolutionary Computation.....	3	TECHCOMM 7029 Systems Engineering 2	3
COMP SCI 7094 Distributed Databases & Data Mining	3	TECHCOMM 7030 Logistics & Supply Chain Management	3
COMP SCI 7401 Introduction to Statistical Machine Learning	3	TECHCOMM 7033 Carbon Management in Business.....	3
COMP SCI 7402 Introduction to Geometric Algorithms.....	3	TECHCOMM 7034 Mine Management & Safety	3
COMP SCI 7403 Mining Big Data	3	TECHCOMM 7036 Digital Media Entrepreneurship	3
and		TECHCOMM 7038 Leadership of Organisations.....	3
which may include courses to the value of 6 units from the following:		TECHCOMM 7039 Business Architecture & Systems	3
TECHCOMM 5001 Marketing Technology and Innovation		TECHCOMM 7040 Portfolios and Programs Management	3
TECHCOMM 5002 Managing Product Design & Development.....	3	TECHCOMM 7043 Infrastructure 1.....	3
TECHCOMM 5004 Managing Project and Systemic Risk	3	TECHCOMM 7044 Infrastructure 2.....	3
TECHCOMM 5005 Financial strategies for technology-based ventures	3	TECHCOMM 7045 Infrastructure 3.....	3
TECHCOMM 5007 Legal Issues of the Commercialisation Process.....	3	Engineering Communication	
TECHCOMM 5008 Leading & Managing	3	ELEC ENG 7057 Engineering Communication & Critical Thinking ^	3
TECHCOMM 5011 Creating Wealth Through Internationalisation	3	^ Unless exempted by the Faculty, all international students are required to take ELEC ENG 7057 Engineering Communication & Critical Thinking.	
TECHCOMM 5012 Integrated Logistics Support	3	2.1.4 Research Project	
TECHCOMM 5013 Systems Engineering 1	3	Students must complete a research project:	
TECHCOMM 5014 Project Management Controls.....	3	COMP SCI 7098 Master of Computing and Innovation Project.....	9
TECHCOMM 5015 Project & Innovation Finance & Accounting	3	2.1.5 Repeating Courses	
TECHCOMM 5016 Entrepreneurship and Innovation	3	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.	
TECHCOMM 5018 Opportunity Assessment.....	3		
TECHCOMM 5021 Applied Project Management I.....	3		
TECHCOMM 5026 Enterprise Transformations.....	3		
TECHCOMM 5027 Business & Project Creation.....	3		
TECHCOMM 7012 Business & Contract Legal Studies	3		
TECHCOMM 7019 Social Entrepreneurship....	3		
TECHCOMM 7022 Creativity & Innovation.....	3		
TECHCOMM 7024 Complex Project Management I.....	3		
TECHCOMM 7025 Introduction to Climate Change in Business	3		
TECHCOMM 7026 Innovation & Corporate Venturing.....	3		

Graduate Diploma in Engineering (GDipE)

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

Overview

- Graduate Diploma in Engineering (Aerospace) (GDipE(Aero))
- Graduate Diploma in Engineering (Chemical) (GDipE(Chem))
- Graduate Diploma in Engineering (Civil and Environmental) (GDipE(CivEnv))
- Graduate Diploma in Engineering (Civil and Structural) (GDipE(CivStruct))
- Graduate Diploma in Engineering (Electrical) (GDipE(Elec))
- Graduate Diploma in Engineering (Electronic) (GDipE(Elec))
- Graduate Diploma in Engineering (Mechanical) (GDipE(Mech))
- Graduate Diploma in Engineering (Mechatronic) (GDipE(Mecht))
- Graduate Diploma in Engineering (Mining) (GDipE(Mining))

The Graduate Diploma in Engineering is an AQF Level 8 qualification with a standard full-time duration of 1 year.

1. Academic Program Rules for Graduate Diploma in Engineering

There shall be a Graduate Diploma in Engineering.

2. Qualification Requirements

2.1 Academic Program

To qualify for the Graduate Diploma in Engineering, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 24 units in one of the following Disciplines:

- Aerospace
- Chemical
- Civil and Environmental
- Civil and Structural
- Electrical
- Electronic
- Mechanical
- Mechatronic
- Mining

2.1.1 Core Courses

- ELEC ENG 7057 Engineering Communication & Critical Thinking 3
- plus
- Courses to the value of 6 units from the following:
 - TECHCOMM 5021 Applied Project Management 1 3
 - STATS 7053 Statistics in Engineering 3
- and either
- APP MTH 7054 Modelling & Simulation of Stochastic Systems 3
- or
- COMP SCI 7077 Solving Engineering Models 3

2.1.1.1 Foundation courses

Foundation courses to the value of 12 units in one specialisation from the following:

Aerospace

- MECH ENG 7073 Space Vehicle Design..... 3
- MECH ENG 7068 Applied Aerodynamics..... 3
- MECH ENG 7066 Aeronautical Engineering 3
- MECH ENG 7067 Aerospace Materials & Structures..... 3

Chemical

- CHEM ENG 7050 Multi-Phase Fluid & Particle Mechanics..... 3
- CHEM ENG 7051 Kinetics & Reactor Design 3
- CHEM ENG 7052 Separation Processes 3
- CHEM ENG 7057 Research Practice..... 3

Civil & Environmental

- C&ENVENG 7079 Water Engineering & Design 3
- C&ENVENG 7086 Engineering Management 3
- C&ENVENG 7029 Environmental Modelling & Management 3
- C&ENVENG 7077 Engineering Hydrology..... 3

Civil & Structural

- C&ENVENG 7058 Structural Mechanics 3
- C&ENVENG 7007 Structural Design (Steel) 3
- C&ENVENG 7005 Structural Design (Concrete)..... 3
- C&ENVENG 7069 Geotechnical Engineering 3

Electrical

ELEC ENG 7082 Principles of Control Systems	3
ELEC ENG 7049 Power Electronic Systems	3
ELEC ENG 7069 Electric Energy Systems	3
ELEC ENG 7074 Power Systems	3

Electronic

ELEC ENG 7033 Principles of RF Engineering	3
ELEC ENG 7082 Principles of Control Systems	3
ELEC ENG 7080 Principles of Communication Systems	3
ELEC ENG 7079 Principles of Signal Processing	3

Mechanical

MECH ENG 7047 Dynamics & Control II	3
MECH ENG 7068 Applied Aerodynamics	3
MECH ENG 7070 Heat Transfer & Thermodynamics	3
MECH ENG 7074 Structural Design & Solid Mechanics	3

Mechatronic

MECH ENG 7047 Dynamics & Control II	3
MECH ENG 7070 Heat Transfer & Thermodynamics	3
MECH ENG 7071 Mechatronics II	3
MECH ENG 7072 Microcontroller Programming	3

Mining

MINING 7071 Mining Systems	3
MINING 7070 Resource Estimation	3
MINING 7073 Mine Planning	3
MINING 7072 Mining Geomechanics	3

2.1.2 Electives

Courses to the value of 3 units from the same specialisation as the foundation courses from the following:

Aerospace

CHEM ENG 7047 Composites & Multiphase Polymers	3
ELEC ENG 7017 Beamforming & Array Processing	3
MECH ENG 7023 Fracture Mechanics	3
MECH ENG 7025 Topics in Welded Structures	3
MECH ENG 7026 Advanced Topics in Fluid Mechanics	3
MECH ENG 7028 Advanced PID Control	3
MECH ENG 7030 Advanced Vibrations	3
MECH ENG 7034 Advanced Digital Control	3
MECH ENG 7043 Stresses in Plates & Shells	3

MECH ENG 7045 CFD for Engineering Applications	3
MECH ENG 7053 Aerospace Propulsion	3
MECH ENG 7059 Finite Element Analysis of Structures	3
MECH ENG 7061 Corrosion Principles & Prevention	3
MECH ENG 7062 Aircraft Design	3
MECH ENG 7063 Advanced Topics in Aerospace Engineering	3
MECH ENG 7075 Sustainable Thermal Technologies	3
MECH ENG 7076 Renewable Fluid Power Technology	3

Chemical

CHEM ENG 7048 Bio-fuels, Biomass & Wastes	3
CHEM ENG 7035 Water & Waste Water Treatment	3
CHEM ENG 7038 Process Plant Safety & Risk Assessment	3
CHEM ENG 7039 Pinch Analysis & Process Synthesis	3
CHEM ENG 7054 Simulation & Concept Design	3
CHEM ENG 7056 Process Control & Instrumentation	3
CHEM ENG 7027 Transport Processes in the Environment	3
CHEM ENG 7055 Material Science & Engineering	3

Civil and Environmental

C&ENVENG 7037 Water Distribution Systems & Design	3
C&ENVENG 7108 Environmental Engineering & Design IVA	3
C&ENVENG 7109 Environmental Engineering & Design IVB	3
C&ENVENG 7042 Advanced Reinforced Concrete	3
C&ENVENG 7044 Introduction to Environmental Law	3
C&ENVENG 7110 Environmental Engineering & Design IVC	3
C&ENVENG 7114 Hydrological Modelling & Water Resources Management	3
C&ENVENG 7115 Flood Estimation & Modelling	3
TECHCOMM 7033 Carbon Management in Business	3
TECHCOMM 7025 Introduction to Climate Change in Business	3
TECHCOMM 5004 Managing Project and Systemic Risk	3
TECHCOMM 7012 Business & Contract Legal Studies	3

Civil and Structural

C&ENVENG 7061 Computer Methods of Structural Analysis	3
C&ENVENG 7059 Structural Response to Blast Loading	3
C&ENVENG 7107 Prestressed Concrete Structures.....	3
C&ENVENG 7108 Environmental Engineering & Design IVA.....	3
C&ENVENG 7033 Seismic Design of Masonry Buildings	3
C&ENVENG 7112 Advanced Civil Geotechnical Engineering	3
MECH ENG 7023 Fracture Mechanics.....	3
MECH ENG 7059 Finite Element Analysis of Structures	3
MECH ENG 7061 Corrosion Principles & Prevention	3
TECHCOMM 5026 Enterprise Transformations	3
TECHCOMM 5004 Managing Project & Systemic Risk	3
TECHCOMM 7012 Business & Contract Legal Studies	3
MECH ENG 7043 Stresses in Plates & Shells.....	3

Electrical

ELEC ENG 7075 Distributed Generation Technologies	3
ELEC ENG 7046 Power Quality & Fault Diagnostics	3
ELEC ENG 7066 Power System Dynamics.....	3
ELEC ENG 7079 Principles of Signal Processing	3
ELEC ENG 7068 Power Systems Monitoring & Protection.....	3
MECH ENG 7034 Advanced Digital Control.....	3
TECHCOMM 5013 Systems Engineering 1	3
TECHCOMM 5014 Project Management Controls.....	3
TECHCOMM 7029 Systems Engineering 2	3

Electronic

ELEC ENG 7049 Power Electronic Systems	3
ELEC ENG 7051 Microelectronic Systems.....	3
ELEC ENG 7060 Image Sensors & Processing	3
ELEC ENG 7015 Adaptive Signal Processing	3
ELEC ENG 7081 Telecommunications Systems	3
ELEC ENG 7084 Avionic Sensors & Systems PG	3
ELEC ENG 7002 Kalman Filtering & Tracking.....	3

Mechanical

CHEM ENG 7047 Composites & Multiphase Polymers	3
MECH ENG 7020 Materials Selection & Failure Analysis	3
MECH ENG 7021 Combustion Technology & Emission Control	3
MECH ENG 7023 Fracture Mechanics.....	3
MECH ENG 7024 Robotics M.....	3
MECH ENG 7025 Topics in Welded Structures.....	3
MECH ENG 7026 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 7027 Engineering Acoustics	3
MECH ENG 7029 Airconditioning	3
MECH ENG 7030 Advanced Vibrations	3
MECH ENG 7043 Stresses in Plates & Shells.....	3
MECH ENG 7044 Biomechanical Engineering	3
MECH ENG 7045 CFD for Engineering Applications	3
MECH ENG 7059 Finite Element Analysis of Structures	3
MECH ENG 7061 Corrosion Principles & Prevention	3
MECH ENG 7075 Sustainable Thermal Technologies	3
MECH ENG 7076 Renewable Fluid Power Technology.....	3

Mechatronic

ELEC ENG 7015 Adaptive Signal Processing	3
ELEC ENG 7060 Image Sensors and & Processing	3
ELEC ENG 7065 Sonar Sensors and & Systems	3
MECH ENG 7024 Robotics M.....	3
MECH ENG 7027 Engineering Acoustics	3
MECH ENG 7028 Advanced PID Control.....	3
MECH ENG 7030 Advanced Vibrations	3
MECH ENG 7034 Advanced Digital Control.....	3
MECH ENG 7044 Biomechanical Engineering	3
MECH ENG 7075 Sustainable Thermal Technologies	3
MECH ENG 7076 Renewable Fluid Power Technology.....	3

Mining

MINING 7107 Surface Mining Systems.....	3
MINING 7114 Simulation & Animation for Mining Engineering	3
MINING 7101 Mine Management.....	3

MINING 7102 Mine Geotechnical Engineering	3
MINING 7106 Hard Rock Mine Design & Feasibility	3
MINING 7063 Mining in a Global Environment.....	3
MINING 7112 Advanced Mine Geotechnical Engineering.....	3
APP MTH 7105 Optimisation & Operations Research	3
C&ENVENG 7043 Introduction to Geostatistics	3
C&ENVENG 7053 Non-Linear Geostatistics	3
C&ENVENG 7056 Linear Geostatistics.....	3
MECHENG 7059 Finite Element Analysis of Structures	3
TECHCOMM 5004 Managing Project & Systemic Risk	3
TECHCOMM 7033 Carbon Management in Business.....	3
TECHCOMM 7032 Mine Financing & Valuation.....	3

2.1.3 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.

Master of Engineering (ME)

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

Overview

The Master of Engineering is comprised of a foundation year and an advanced studies year. The foundation year consists of a set of courses designed to ensure that students acquire a level of expertise in the relevant specialisation. This program gives the opportunity to study technical courses at an advanced level and the opportunity to engage in a research project.

An exit path will be available for students completing only the foundation year, after they satisfy a set requirement within the relevant discipline. In this case a Graduate Diploma will be awarded.

International students from non-English speaking backgrounds will be required to take an English language communications course.

Students must specialise in one of the following disciplines

Aerospace Engineering

Aerospace engineering is focused on the development and use of new technologies and materials that are relevant to any high-tech industries including the aerospace industry.

Chemical Engineering

Chemical Engineering combines knowledge of basic chemistry and mathematics with engineering principles and applies them to the systematic design, development and operation of process systems for the extraction, transformation and recovery of materials.

Civil and Environmental Engineering

Civil and Environmental Engineering is concerned with assessing and managing the effects of human activity on the natural and built environments and doing it in a sustainable manner. This ensures that we can provide adequate infrastructure and natural resources for current generations, without compromising the ability of future generations to do the same.

Civil and Structural Engineering

Civil and Structural Engineering involves the planning, design and construction of society's major infrastructures such as bridges, buildings, structures, roads, water supply, dams, pipelines, sewerage treatment facilities, drainage, pollution control equipment and coastal management facilities.

Electrical Engineering

This program is designed for graduates who wish to undertake advanced studies in electrical power engineering. It provides an opportunity to study specialist topics such as Power Quality and Fault Diagnostics, Power Systems Monitoring and Protection and Distributed Generation Technologies, as well as an opportunity to develop advanced levels of understanding of related topics in mathematics, project management and system engineering.

Electronic Engineering

This program is intended for graduates who wish to undertake advanced studies in selected specialist topics in electronic engineering. It provides an opportunity to study specialist topics such as Telecommunications, Microelectronics, Image Sensors and Processing and Power Electronic Systems as well as an opportunity to develop advanced levels of understanding of related topics in mathematics, project management and system engineering.

Mechanical Engineering

Mechanical engineering is concerned with the management of people and resources, the development and use of new technologies and the design and development of new processes and products. This mostly involves 'things that move', such as motor vehicles, aircraft systems, engines, pumps, gas turbines, industrial plants, air conditioning / refrigeration systems, manufacturing processes, building services and even space stations.

Mechatronic Engineering

Mechatronic engineering is a discipline that combines mechanics with electronics and computing. It involves the design, construction and maintenance of intelligent machines, micro-machines, smart structures, intelligent systems, control systems and consumer products such as cameras, washing machines or a fully automated robotic assembly line or they may be involved with defence technology and systems.

Mining Engineering

The program has an emphasis on technical analysis and evaluation of mining systems including mine design and planning, rock mechanics, modelling and simulation, risk and uncertainty, mining geostatistics, mine management and sustainable mining practices.

Signal and Information Processing

The program provides an advanced level of education in signal processing techniques and their application to sensor systems, including imaging systems, sonar and radar. Students may choose to take courses that will develop advanced levels of understanding of related topics in mathematics, project management and system engineering.

Students who have been granted less than 24 units of credit are required to maintain a Grade Point Average of 5.0 for courses in Academic Program Rules 2.1.1 and 2.1.2 to the value of 24 units. Students who have not achieved this standard will not be permitted to continue study towards the degree.

Before being admitted to the degree a student must complete a period of practical experience in work approved by the Faculty.

The Master of Engineering is an AQF Level 9 qualification with a standard full-time duration of 2 years.

Students who have completed a Bachelor of Engineering accredited under the Washington Accord are eligible for up to 24 units of credit.

1. Academic Program Rules for Master of Engineering

There shall be a Master of Engineering.

2. Qualification Requirements

2.1 Academic Program

To qualify for the Master of Engineering, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 48 units in one of the following Disciplines:

Aerospace
Chemical
Civil & Environmental
Civil & Structural
Electrical
Electronic
Mechanical
Mechatronic
Mining
Signal & Information Processing

2.1.1 Core Courses

ELEC ENG 7057 Engineering Communication & Critical Thinking 3
plus

Courses to the value of 6 units from the following:

TECHCOMM 5021 Applied Project Management 1 3
STATS 7053 Statistics in Engineering 3
and either
APP MTH 7054 Modelling and Simulation of Stochastic Systems..... 3
or
COMP SCI 7077 Solving Engineering Models 3

2.1.1.1 Foundation Courses

Foundation courses to the value of 12 units in one specialisation from the following:

Aerospace

MECH ENG 7073 Space Vehicle Design..... 3
MECH ENG 7068 Applied Aerodynamics 3
MECH ENG 7066 Aeronautical Engineering 3
MECH ENG 7067 Aerospace Materials & Structures..... 3

Chemical

CHEM ENG 7050 Multi-Phase Fluid & Particle Mechanics..... 3
CHEM ENG 7051 Kinetics & Reactor Design 3
CHEM ENG 7052 Separation Processes 3
CHEM ENG 7057 Research Practice..... 3

Civil and Environmental

C&ENVENG 7079 Water Engineering & Design 3
C&ENVENG 7086 Engineering Management 3
C&ENVENG 7029 Environmental Modelling & Management 3
C&ENVENG 7077 Engineering Hydrology..... 3

Civil and Structural

C&ENVENG 7058 Structural Mechanics 3
C&ENVENG 7007 Structural Design (Steel) 3
C&ENVENG 7005 Structural Design (Concrete)..... 3
C&ENVENG 7069 Geotechnical Engineering 3

Electrical

ELEC ENG 7082 Principles of Control Systems 3
ELEC ENG 7049 Power Electronic Systems 3
ELEC ENG 7069 Electric Energy Systems 3
ELEC ENG 7074 Power Systems 3

Electronic

ELEC ENG 7033 Principles of RF Engineering 3
ELEC ENG 7082 Principles of Control Systems 3

ELEC ENG 7080 Principles of Communication Systems	3
ELEC ENG 7079 Principles of Signal Processing	3
Mechanical	
MECH ENG 7047 Dynamics & Control II.....	3
MECH ENG 7068 Applied Aerodynamics.....	3
MECH ENG 7070 Heat Transfer & Thermodynamics	3
MECH ENG 7074 Structural Design & Solid Mechanics.....	3
Mechatronic	
MECH ENG 7047 Dynamics & Control II.....	3
MECH ENG 7070 Heat Transfer & Thermodynamics	3
MECH ENG 7071 Mechatronics II.....	3
MECH ENG 7072 Microcontroller Programming	3
Mining	
MINING 7071 Mining Systems	3
MINING 7070 Resource Estimation	3
MINING 7073 Mine Planning	3
MINING 7072 Mining Geomechanics	3
Signal Information Processing	
ELEC ENG 7033 Principles of RF Engineering.....	3
ELEC ENG 7082 Principles of Control Systems	3
ELEC ENG 7080 Principles of Communication Systems	3
ELEC ENG 7079 Principles of Signal Processing	3

2.1.2 Electives

Courses to the value of 15 units from the same specialisation as the foundation courses from the following:

Aerospace

CHEM ENG 7047 Composites & Multiphase Polymers	3
ELEC ENG 7017 Beamforming & Array Processing	3
MECH ENG 7023 Fracture Mechanics.....	3
MECH ENG 7025 Topics in Welded Structures.....	3
MECH ENG 7026 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 7028 Advanced PID Control.....	3
MECH ENG 7030 Advanced Vibrations	3
MECH ENG 7034 Advanced Digital Control....	3
MECH ENG 7045 CFD for Engineering Applications	3
MECH ENG 7053 Aerospace Propulsion.....	3
MECH ENG 7059 Finite Element Analysis of Structures	3

MECH ENG 7061 Corrosion Principles & Prevention	3
MECH ENG 7062 Aircraft Design.....	3
MECH ENG 7063 Advanced Topics in Aerospace Engineering	3
MECH ENG 7075 Sustainable Thermal Technologies	3
MECH ENG 7076 Renewable Fluid Power Technology.....	3
Chemical	
CHEM ENG 7027 Transport Processes in the Environment	3
CHEM ENG 7035 Water & Waste Water Treatment.....	3
CHEM ENG 7038 Process Plant Safety & Risk Assessment	3
CHEM ENG 7039 Pinch Analysis & Process Synthesis.....	3
CHEM ENG 7048 Bio-fuels, Biomass & Wastes	3
CHEM ENG 7054 Simulation & Concept Design	3
CHEM ENG 7055 Material Science & Engineering	3
CHEM ENG 7056 Process Control & Instrumentation	3
CHEM ENG 7058 Hydro & Electrometallurgy.....	3
CHEM ENG 7059 Pyrometallurgy	3
MECH ENG 7021 Combustion Technology & Emissions Control.....	3
Civil and Environmental	
C&ENVENG 7037 Water Distribution Systems & Design.....	3
C&ENVENG 7108 Environmental Engineering & Design IVA.....	3
C&ENVENG 7109 Environmental Engineering & Design IVB.....	3
C&ENVENG 7044 Introduction to Environmental Law	3
C&ENVENG 7110 Environmental Engineering & Design IVC.....	3
C&ENVENG 7114 Hydrological Modelling & Water Resources Management	3
C&ENVENG 7115 Flood Estimation & Modelling	3
TECHCOMM 7023 Carbon Impact & Strategy.....	3
TECHCOMM 7033 Carbon Management in Business.....	3
TECHCOMM 7025 Introduction to Climate Change in Business.....	3
TECHCOMM 5004 Managing Project & Systemic Risk	3
TECHCOMM 7012 Business & Contract Legal Studies	3

Civil and Structural

C&ENVENG 7061 Computer Methods of Structural Analysis	3
C&ENVENG 7059 Structural Response to Blast Loading	3
C&ENVENG 7107 Prestressed Concrete Structures.....	3
C&ENVENG 7108 Environmental Engineering & Design IVA.....	3
C&ENVENG 7033 Seismic Design of Masonry Buildings	3
C&ENVENG 7112 Advanced Civil Geotechnical Engineering	3
C&ENVENG 7042 Advanced Reinforced Concrete.....	3
MECH ENG 7023 Fracture Mechanics.....	3
MECH ENG 7059 Finite Element Analysis of Structures	3
MECH ENG 7061 Corrosion Principles & Prevention	3
TECHCOMM 5026 Enterprise Transformations	3
TECHCOMM 5004 Managing Project & Systemic Risk	3
TECHCOMM 7012 Business & Contract Legal Studies	3
MECH ENG 7043 Stresses in Plates & Shells.....	3

Electrical

ELEC ENG 7075 Distributed Generation Technologies.....	3
ELEC ENG 7046 Power Quality & Fault Diagnostics	3
ELEC ENG 7066 Power System Dynamics	3
ELEC ENG 7079 Principles of Signal Processing	3
ELEC ENG 7068 Power Systems Monitoring & Protection.....	3
MECH ENG 7034 Advanced Digital Control.....	3
TECHCOMM 5013 Systems Engineering 1	3
TECHCOMM 5014 Project Management Controls.....	3
TECHCOMM 7029 Systems Engineering 2	3

Electronic

ELEC ENG 7049 Power Electronic Systems	3
ELEC ENG 7051 Microelectronic Systems	3
ELEC ENG 7060 Image Sensors & Processing	3
ELEC ENG 7015 Adaptive Signal Processing	3
either	
ELEC ENG 7083 Telecommunications Principles and Systems	6
or	

ELEC ENG 7081 Telecommunications Systems	3
ELEC ENG 7084 Avionic Sensors & Systems PG.....	3
ELEC ENG 7002 Kalman Filtering & Tracking....	3
ELEC ENG 7055 Antennas & Propagation	3

Mechanical

CHEM ENG 7047 Composites & Multiphase Polymers	3
MECH ENG 7020 Materials Selection & Failure Analysis	3
MECH ENG 7021 Combustion Technology & Emission Control	3
MECH ENG 7023 Fracture Mechanics.....	3
MECH ENG 7024 Robotics M.....	3
MECH ENG 7025 Topics in Welded Structures.....	3
MECH ENG 7026 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 7027 Engineering Acoustics	3
MECH ENG 7029 Airconditioning	3
MECH ENG 7030 Advanced Vibrations	3
MECH ENG 7043 Stresses in Plates & Shells.....	3
MECH ENG 7044 Biomechanical Engineering.....	3
MECH ENG 7045 CFD for Engineering Applications	3
MECH ENG 7059 Finite Element Analysis of Structures	3
MECH ENG 7061 Corrosion Principles & Prevention	3
MECH ENG 7075 Sustainable Thermal Technologies.....	3
MECH ENG 7076 Renewable Fluid Power Technology.....	3

Mechatronic

ELEC ENG 7015 Adaptive Signal Processing	3
ELEC ENG 7017 Beamforming & Array Processing	3
ELEC ENG 7055 Antennas & Propagation.....	3
ELEC ENG 7060 Image Sensors & Processing	3
ELEC ENG 7065 Sonar Sensors & Systems.....	3
MECH ENG 7024 Robotics M.....	3
MECH ENG 7027 Engineering Acoustics	3
MECH ENG 7028 Advanced PID Control.....	3
MECH ENG 7030 Advanced Vibrations	3
MECH ENG 7034 Advanced Digital Control.....	3
MECH ENG 7044 Biomechanical Engineering	3
MECH ENG 7075 Sustainable Thermal Technologies.....	3

MECH ENG 7076 Renewable Fluid Power
Technology..... 3

Mining

MINING 7107 Surface Mining Systems..... 3
 MINING 7114 Simulation & Animation for
 Mining Engineering 3
 MINING 7101 Mine Management..... 3
 MINING 7102 Mine Geotechnical
 Engineering 3
 MINING 7106 Hard Rock Mine Design &
 Feasibility 3
 MINING 7063 Mining in a Global
 Environment..... 3
 MINING 7112 Advanced Mine Geotechnical
 Engineering 3
 APP MTH 7105 Optimisation & Operations
 Research 3
 C&ENVENG 7043 Introduction to
 Geostatistics 3
 C&ENVENG 7053 Non-Linear Geostatistics 3
 C&ENVENG 7056 Linear Geostatistics..... 3
 MECHENG 7059 Finite Element Analysis
 of Structures 3
 TECHCOMM 5004 Managing Project &
 Systemic Risk 3
 TECHCOMM 7033 Carbon Management in
 Business..... 3
 TECHCOMM 7032 Mine Financing &
 Valuation..... 3

Signal Information Processing

ELEC ENG 7002 Kalman Filtering &
 Tracking 3
 ELEC ENG 7017 Beamforming & Array
 Processing 3
 ELEC ENG 7071 Detection, Estimation &
 Classification..... 3
 ELEC ENG 7051 Microelectronic Systems 3
 ELEC ENG 7055 Antennas & Propagation..... 3
 ELEC ENG 7060 Image Sensors &
 Processing 3
 ELEC ENG 7068 Power Systems
 Monitoring & Protection..... 3
 ELEC ENG 7085 Multisensor Data Fusion..... 3

2.1.3 Research Project

Students must complete a research project
 from the relevant Discipline:

C&ENVENG 7049A/B Masters Civil &
 Structural Engineering Project Part 1 & 2 12
 C&ENVENG 7050A/B Masters Civil &
 Environmental Engineering Project
 Part 1 & 2 12
 CHEM ENG 7046A/B Masters Chemical
 Project Part 1 & 2..... 12
 ELEC ENG 7076A/B Masters Project (SIP)
 Part A & B 12

ELEC ENG 7077A/B Masters Electronic
 Project Part A & B..... 12
 ELEC ENG 7078A/B Masters Electrical
 Project Part A & B..... 12
 MECH ENG 7041A/B Masters Mechanical
 Project Part 1 & 2..... 12
 MINING 7074A/B Masters Mining
 Engineering Project Part A & B 12

**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.

For the Disciplines of Mechanical,
 Mechanical and Aerospace, Mechanical
 and Sports, and Mechatronic students must
 complete Workshop Practice, a short course
 which will normally occupy a one week
 period during a semester break.

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.

Master of Geostatistics (MGeostat)

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

Overview

This program provides theoretical background and intensive practical training in Geostatistics with particular emphasis on its applications to mineral resource evaluation, geological modelling, geotechnical modelling, hydrocarbon reservoir characterisation and the modelling and prediction of environmental variables. The program is based on practical applications and a major aim is to equip graduates with the techniques necessary for immediate application to problem solving in industry and applied science. Delivered through intensive courses, this program can be completed in a year and a half and is designed specifically for people in full time employment.

The Master of Geostatistics is an AQF Level 9 qualification with a standard full-time duration of 1.5 years.

1. Academic Program Rules for Master of Geostatistics

There shall be a Master of Geostatistics.

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Master of Geostatistics, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 36 units:

2.1.1 Core Courses

C&ENVENG 7043 Introduction to Geostatistics	3
C&ENVENG 7056 Linear Geostatistics.....	3
STATS 7061 Statistical Analysis	3
C&ENVENG 7053 Non-linear Geostatistics	3
C&ENVENG 7052 Geostatistical Simulation.....	3
C&ENVENG 7063 Computing for Geostatistics	3
C&ENVENG 7064 Non-Stationarity, Selection & Recoverability	3
STATS 7062 Multivariate Geostatistics	3

2.1.2 Research Project

Students must complete supervised project work and seminar presentation to the value of 12 units:

C&ENVENG 7051 Geostatistics Project & Thesis (Full-time).....	12
or	
C&ENVENG 7060A/B Geostatistics Project & Thesis (Part-time)	12

2.1.3 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.

Graduate Certificate in Marine Engineering (GCertMarineE)

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

Overview

Programs in marine engineering offer students the opportunity to further develop and enhance their skills and expertise in this field. Courses from a number of other leading universities throughout Australia are also included. Marine engineering programs are structured so that students can complete the degree in steps. This approach provides the opportunity to complete the Graduate Certificate, then Graduate Diploma and finally the Master Degree.

The Graduate Certificate in Marine Engineering is an AQF Level 8 qualification with a standard full-time duration of 0.5 years.

1. Academic Program Rules for Graduate Certificate in Marine Engineering

There shall be a Graduate Certificate in Marine Engineering.

2. Qualification Requirements

2.1 Academic Program

To qualify for the Graduate Certificate in Marine Engineering, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 12 units, with at least 9 units to be presented from University of Adelaide courses:

2.1.1 Core Courses

Courses to the value of 9 units from Academic Program Rules 2.1.1a or 2.1.1b:

a. Submarine

University of Adelaide

MECH ENG 7042 Introduction to Submarine Design 3

MECH ENG 7046 Submarine Design..... 3

University of South Australia

Systems Engineering for Complex Problem Solving..... 3

or

University of Adelaide

TECHCOMM 5013
Systems Engineering 1+ 3

+(Only with the permission of the Faculty)

b. Naval Ships

University of Adelaide

MECH ENG 7048 Introduction to Naval Ship Engineering 3

MECH ENG 7065 Naval Ship Engineering 3

University of South Australia

Systems Engineering for Complex Problem Solving..... 3

or

University of Adelaide

TECHCOMM 5013
Systems Engineering 1+ 3

+(Only with the permission of the Faculty)

2.1.2 Electives

Courses to the value of 3 units from the following:

University of Adelaide

APP MTH 7075 Fluid Mechanics 3

CHEM ENG 7047 Composites and Multiphase Polymers 3

COMP SCI 7076 Distributed Systems 3

ELEC ENG 7015 Adaptive Signal Processing..... 3

ELEC ENG 7017 Beamforming & Array Processing 3

ELEC ENG 7033 Principles of RF Engineering 3

ELEC ENG 7046 Power Quality & Fault Diagnosis 3

ELEC ENG 7049 Power Electronics Systems 3

ELEC ENG 7055 Antennas & Propagation..... 3

ELEC ENG 7065 Sonar Sensors & Systems 3

ELEC ENG 7069 Electric Energy Systems 3

ELEC ENG 7071 Detection, Estimation & Classification..... 3

ELEC ENG 7082 Principles of Control Systems 3

MECH ENG 7020 Materials Selection & Failure Analysis 3

MECH ENG 7023 Fracture Mechanics..... 3

MECH ENG 7025 Topics in Welded Structures..... 3

MECH ENG 7026 Advanced Topics in Fluid Mechanics..... 3

MECH ENG 7027 Engineering Acoustics 3

MECH ENG 7029 Airconditioning 3

MECH ENG 7030 Advanced Vibrations	3
MECH ENG 7034 Advanced Digital Control.....	3
MECH ENG 7043 Stresses in Plates & Shells.....	3
MECH ENG 7045 CFD for Engineering Applications	3
MECH ENG 7047 Dynamics and Control II.....	3
MECH ENG 7059 Finite Element Analysis of Structures	3
MECH ENG 7061 Corrosion: Principles and Prevention	3
TECHCOMM 5021 Applied Project Management 1	3

2.1.3 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.

Graduate Diploma in Marine Engineering (GDipMarineE)

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

Overview

Programs in marine engineering offer students the opportunity to further develop and enhance their skills and expertise in this field. Courses from a number of other leading universities throughout Australia are also included. Marine engineering programs are structured so that students can complete the degree in steps. This approach provides the opportunity to complete the Graduate Certificate, then Graduate Diploma and finally the Master Degree.

The Graduate Diploma in Marine Engineering is an AQF Level 8 qualification with a standard full-time duration of 1 year.

Condition of Admission

Work experience: For applicants without a Graduate Certificate in Marine Engineering a minimum of 1 year of full-time work experience in a relevant field will be required.

1. Academic Program Rules for Graduate Diploma in Marine Engineering

There shall be a Graduate Diploma in Marine Engineering.

2. Qualification Requirements

2.1 Academic Program

To qualify for the Graduate Diploma in Marine Engineering, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 24 units, with at least 18 units to be presented from University of Adelaide courses:

2.1.1 Core Courses

Courses to the value of 9 units from Academic Program Rules 2.1.1a or 2.1.1b:

a. Submarine

University of Adelaide

MECH ENG 7042 Introduction to Submarine Design 3

MECH ENG 7046 Submarine Design 3

University of South Australia

Systems Engineering for Complex Problem Solving 3

or

University of Adelaide

TECHCOMM 5013
Systems Engineering 1+ 3

+(Only with the permission of the Faculty)

b. Naval Ships

University of Adelaide

MECH ENG 7048 Introduction to Naval Ship Engineering 3

MECH ENG 7065 Naval Ship Engineering 3

University of South Australia

Systems Engineering for Complex Problem Solving 3

or

University of Adelaide

TECHCOMM 5013
Systems Engineering 1+ 3

+(Only with the permission of the Faculty)

2.1.2 Electives

Courses to the value of 15 units from the following:

University of Adelaide

APP MTH 7075 Fluid Mechanics 3

CHEM ENG 7047 Composites & Multiphase Polymers 3

COMP SCI 7076 Distributed Systems 3

ELEC ENG 7015 Adaptive Signal Processing 3

ELEC ENG 7017 Beamforming and Array Processing 3

ELEC ENG 7033 Principles of RF Engineering 3

ELEC ENG 7046 Power Quality & Fault Diagnosis 3

ELEC ENG 7049 Power Electronics Systems 3

ELEC ENG 7055 Antennas & Propagation 3

ELEC ENG 7065 Sonar Sensors & Systems 3

ELEC ENG 7069 Electric Energy Systems 3

ELEC ENG 7071 Detection, Estimation & Classification 3

ELEC ENG 7082 Principles of Control Systems 3

MECH ENG 7020 Materials Selection & Failure Analysis 3

MECH ENG 7023 Fracture Mechanics 3

MECH ENG 7025 Topics in Welded Structures 3

MECH ENG 7026 Advanced Topics in Fluid Mechanics.....	3
MECH ENG 7027 Engineering Acoustics	3
MECH ENG 7029 Airconditioning	3
MECH ENG 7030 Advanced Vibrations	3
MECH ENG 7034 Advanced Digital Control.....	3
MECH ENG 7043 Stresses in Plates & Shells.....	3
MECH ENG 7045 CFD for Engineering Applications	3
MECH ENG 7047 Dynamics & Control II.....	3
MECH ENG 7049A/B Marine Engineering Research Project Part A & B	12
MECH ENG 7059 Finite Element Analysis of Structures	3
MECH ENG 7061 Corrosion: Principles and Prevention	3
TECHCOMM 5021 Applied Project Management 1#.....	3
TECHCOMM 7024 Complex Project Management I.....	3
TECHCOMM 7029 Systems Engineering 2.....	3
<i>Australasian Corrosion Association</i>	
Coatings Engineering*	3
<i>Australian Maritime College</i>	
Design of Marine Machinery Systems	3
Marine Propulsion Systems	3
Principles of Naval Architecture	3
Ship Design.....	3
<i>Curtin University</i>	
Physical and Acoustical Oceanography.....	3
Marine Acoustics.....	3
<i>RMIT University</i>	
Risk and Technology Decisions*#	3
<i>University of South Australia</i>	
Electromagnetic Compatibility	3
Requirements Engineering*	3
Principles of Test Evaluation N*	3
Satellite Communications G.....	3

#Students can undertake one of either Applied Project Management 1 or Risk and Technology Decisions.

*Students may present no more than 6 units of courses denoted with an asterisk.

2.1.3 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.

Master of Marine Engineering (MMarineE)

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

Overview

The Masters degree in Marine Engineering supports two majors—one focused on submarines and one focused on surface ships. The objective of this program is to fill an educational gap for marine defence and civil industry engineers, by providing the means for them to obtain a relevant higher degree qualification, thus providing an incentive for attracting new staff and retaining experienced personnel. The broader aim of the Masters program is to address the shortage of relevant higher education in the defence and civil marine engineering sector by providing the only Master degree in Marine Engineering or equivalent in Australia. This program also accepts enrolments from international applicants. The 18 month Master by coursework program allows students to put into practice some of the fundamentals learnt in earlier years. At the same time, elective courses allow students to go more deeply into topics for which they already have the fundamentals, while others allow for a broadening of the student experience.

The Master of Marine Engineering is an AQF Level 9 qualification with a standard full-time duration of 1.5 years.

Condition of Admission

Work experience: Applicants without an Honours degree in Engineering or a Graduate Diploma in Marine Engineering must provide evidence of formal qualifications and professional work experience providing equivalent learning outcomes. As a guideline, a minimum of 2 years of full-time relevant professional work experience will be required.

1. Academic Program Rules for Master of Marine Engineering

There shall be a Master of Marine Engineering.

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Master of Marine Engineering, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 36 units, with at least

21 units to be presented from University of Adelaide courses:

2.1.1 Core Courses

Courses to the value of 9 units from Academic Program Rules 2.1.1a or 2.1.1b:

a. Submarine

University of Adelaide

MECH ENG 7042 Introduction to Submarine Design	3
MECH ENG 7046 Submarine Design.....	3

University of South Australia

Systems Engineering for Complex Problem Solving.....	3
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or

University of Adelaide

TECHCOMM 5013 Systems Engineering 1+	3
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+(Only with the permission of the Faculty)

b. Naval Ships

University of Adelaide

MECH ENG 7048 Introduction to Naval Ship Engineering	3
MECH ENG 7065 Naval Ship Engineering	3

University of South Australia

Systems Engineering for Complex Problem Solving.....	3
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or

University of Adelaide

TECHCOMM 5013 Systems Engineering 1+	3
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+(Only with the permission of the Faculty)

2.1.2 Electives

Courses to the value of 15 units from the following:

University of Adelaide

APP MTH 7075 Fluid Mechanics	3
CHEM ENG 7047 Composites and Multiphase Polymers	3
COMP SCI 7076 Distributed Systems	3
ELEC ENG 7015 Adaptive Signal Processing	3
ELEC ENG 7017 Beamforming and Array Processing	3
ELEC ENG 7033 Principles of RF Engineering	3
ELEC ENG 7046 Power Quality & Fault Diagnosis	3

ELEC ENG 7049 Power Electronics Systems	3	#Students can undertake only one of Applied Project Management 1 and Risk and Technology Decisions.
ELEC ENG 7055 Antennas and Propagation.....	3	*Students may present no more than 9 units of courses denoted with an asterisk.
ELEC ENG 7065 Sonar Sensors & Systems	3	
ELEC ENG 7069 Electric Energy Systems	3	
ELEC ENG 7071 Detection, Estimation & Classification.....	3	
ELEC ENG 7082 Principles of Control Systems	3	
MECH ENG 7020 Materials Selection & Failure Analysis	3	
MECH ENG 7023 Fracture Mechanics.....	3	
MECH ENG 7025 Topics in Welded Structures.....	3	
MECH ENG 7026 Advanced Topics in Fluid Mechanics.....	3	
MECH ENG 7027 Engineering Acoustics	3	
MECH ENG 7029 Airconditioning	3	
MECH ENG 7030 Advanced Vibrations	3	
MECH ENG 7034 Advanced Digital Control.....	3	
MECH ENG 7043 Stresses in Plates & Shells.....	3	
MECH ENG 7045 CFD for Engineering Applications	3	
MECH ENG 7047 Dynamics and Control.....	3	
MECH ENG 7059 Finite Element Analysis of Structures	3	
MECH ENG 7061 Corrosion: Principles and Prevention	3	
MECH ENG 7072 Special Studies in Marine Engineering	3	
TECHCOMM 5021 Applied Project Management 1#.....	3	
TECHCOMM 7029 Systems Engineering 2	3	
Australasian Corrosion Association		
Coatings Engineering*	3	
Australian Maritime College		
Design of Marine Machinery Systems	3	
Marine Propulsion Systems	3	
Principles of Naval Architecture	3	
Ship Design.....	3	
Curtin University		
Physical and Acoustical Oceanography	3	
Marine Acoustics.....	3	
RMIT University		
Risk and Technology Decisions*#	3	
University of South Australia		
Electromagnetic Compatibility	3	
Military Systems - Operational and Technological Integration*	3	
Requirements Engineering*	3	
Principles of Test Evaluation N*	3	

2.1.3 Research Project

MECH ENG 7049 Marine Engineering Research Project A&B	12
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2.1.4 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.

Master of Petroleum Engineering (MPetrolE)

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

Overview

The Master of Petroleum Engineering is designed for graduates of a Bachelor of Engineering (Honours) or equivalent in a discipline other than petroleum engineering (e.g. chemical, civil, mechanical). The program is suited to students who wish to gain a petroleum engineering qualification and enter the exploration and production (upstream) part of the petroleum industry. It is also aimed at petro-technical professionals already working in the upstream petroleum industry who wish to advance their technical careers in petroleum engineering. Individuals who have a relevant degree with a strong mathematics component (such as geophysics, physics, applied mathematics), or who have significant upstream petroleum industry experience may also be eligible for, and benefit from, this program. Applicants with adequate upstream oil and gas experience may be considered for mid-year entry.

The Master of Petroleum Engineering is an AQF Level 9 qualification with a standard full-time duration of 1.5 years.

1. Academic Program Rules for Master of Petroleum Engineering

There shall be a Master of Petroleum Engineering.

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Master of Petroleum Engineering, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 36 units:

2.1.1 Core Courses

Courses to the value of 30 units from the following:

PETROENG 7030 Introduction to Petroleum Engineering	3
PETROENG 7051 Formation Damage and Productivity Enhancement	3
PETROENG 7035 Reservoir Simulation	3
PETROENG 7038 Well Testing & Pressure Transient Analysis	3
PETROENG 7042 Drilling, Engineering & Well Completion	3

PETROENG 7050 Production Engineering	3
PETROENG 7058 Petroleum Geology & Geophysics	3
PETROENG 7059 Reservoir Engineering VII	3
PETROENG 7060 Petrophysics	3
PETROENG 7062 Unconventional Resources and & Recovery	3

2.1.2 Research Project

Courses to the value of 6 units from the following:

PETROENG 7070 Integrated Field Development Planning & Economics Project	6
PETROENG 7071 Research Project	6

2.1.3 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.

Graduate Certificate in Petroleum Geology and Geophysics (GCertPetrolGeolGeoph)

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

Overview

The Graduate Certificate in Petroleum Geology and Geophysics is a coursework option for graduates wishing to develop knowledge and skills for careers as geoscientists. Students in the program should benefit from the School's strong links with industry and senior industry personnel teach specialist units in the coursework program.

The Graduate Certificate in Petroleum Geology and Geophysics is an AQF Level 8 qualification with a standard full-time duration of 0.5 years.

1. Academic Program Rules for Graduate Certificate in Petroleum Geology and Geophysics

There shall be a Graduate Certificate in Petroleum Geology and Geophysics.

2. Qualification Requirements

2.1 Academic Program

To qualify for the Graduate Certificate in Petroleum Geology and Geophysics, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 12 units:

2.1.1 Core Courses

PETROGEO 7010 Fundamentals of Petroleum Geoscience I	3
PETROGEO 7011 Fundamentals of Petroleum Geoscience II	3
PETROGEO 7012 Petroleum Resource Evaluation.....	3
PETROGEO 7013 Petroleum Systems and Basin Evaluation.....	3

2.1.2 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.

Graduate Certificate in Sciences (Defence) (GCertSc(Def))

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

Overview

The Graduate Diploma in Sciences (Defence) is designed to serve the needs of professionals working in the defence industry, who wish to upgrade their qualifications by undertaking advanced coursework studies in topics related to the defence industry.

The Graduate Certificate in Sciences (Defence) is an AQF Level 8 qualification with a standard full-time duration of 0.5 years.

Condition of Admission

Work experience: At least 18 months employment experience in a defence related industry is required.

1. Academic Program Rules for Graduate Certificate in Sciences (Defence)

There shall be a Graduate Certificate in Sciences (Defence).

2. Qualification Requirements

2.1 Academic Program

To qualify for the Graduate Certificate in Sciences (Defence), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 12 units:

2.1.1 Core Courses

This course is offered by the University of South Australia:

EEET 5107 System Engineering for Complex Problem Solving 3

2.1.2 Electives

Courses to the value of 9 units from the following:

Defence Technology Specialisation

ELEC ENG 7082 Principles of Control Systems 3

ELEC ENG 7033 Principles of RF Engineering 3

ELEC ENG 7015 Adaptive Signal Processing 3

ELEC ENG 7002 Kalman Filtering & Tracking 3

ELEC ENG 7071 Detection, Estimation & Classification 3

ELEC ENG 7060 Image Sensors & Processing 3

ELEC ENG 7070 Electromagnetic Simulations 3

PHYSICS 7010 Non-Linear Optics 3

PHYSICS 7540 Optics & Photonics 3

PHYSICS 7007 Fourier Techniques & Applications 3

Information and Communication Technology Specialisation

COMP SCI 7076 Distributed Systems 3

COMP SCI 7059 Artificial Intelligence 3

STATS 7053 Statistics in Engineering 3

COMP SCI 7039 Computer Networks & Applications 3

COMP SCI 7005 Adaptive Business Intelligence 3

COMP SCI 7022 Computer Vision 3

COMP SCI 7093 Evolutionary Computation 3

ELEC ENG 7070 Electromagnetic Simulations 3

COMP SCI 7092 Mobile & Wireless Networks 3

PSYCHOL 7336 Human Factors 3

PSYCHOL 6022 Foundations of Perception and Cognition 3

PSYCHOL 6027 Perception and Cognition 3

ELEC ENG 7059 Radar Principles & Systems - An Introduction 3

PHYSICS 7534 Computational Physics 3

2.1.3 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.

Graduate Diploma in Sciences (Defence) (GDipSc(Def))

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

Overview

The Graduate Diploma in Sciences (Defence) is designed to serve the needs of professionals working in the defence industry, who wish to upgrade their qualifications by undertaking advanced coursework studies in topics related to the defence industry.

The Graduate Diploma in Sciences (Defence) is an AQF Level 8 qualification with a standard full-time duration of 1 year.

Condition of Admission

Work experience: At least 18 months employment experience in a defence-related industry is required.

1. Academic Program Rules for Graduate Diploma in Sciences (Defence)

There shall be a Graduate Diploma in Sciences (Defence).

2. Qualification Requirements

2.1 Academic Program

To qualify for the Graduate Diploma in Sciences (Defence), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 24 units:

2.1.1 Core Courses

Both of these courses are offered by the University of South Australia:

EEET 5004 Engineering Research Practice	3
EEET 5107 System Engineering for Complex Problem Solving	3

2.1.2 Electives

Courses to the value of 18 units from the following:

Defence Technology Specialisation

ELEC ENG 7082 Principles of Control Systems	3
ELEC ENG 7033 Principles of RF Engineering	3
ELEC ENG 7017 Beamforming & Array Processing	3
ELEC ENG 7015 Adaptive Signal Processing	3

ELEC ENG 7002 Kalman Filtering & Tracking	3
ELEC ENG 7060 Image Sensors & Processing	3
ELEC ENG 7070 Electromagnetic Simulations: Practical Aspects	3
PHYSICS 7010 Non-Linear Optics	3
PHYSICS 7540 Optics & Photonics	3
PHYSICS 7007 Fourier Techniques & Applications	3
ELEC ENG 7071 Detection, Estimation & Classification	3

Information and Communication Technology Specialisation

ELEC ENG 7059 Radar Principles & Systems - An Introduction	3
PHYSICS 7534 Computational Physics	3
COMP SCI 7076 Distributed Systems	3
COMP SCI 7059 Artificial Intelligence	3
STATS 7053 Statistics in Engineering	3
COMP SCI 7039 Computer Networks & Applications	3
COMP SCI 7005 Adaptive Business Intelligence	3
COMP SCI 7022 Computer Vision	3
COMP SCI 7093 Evolutionary Computation	3
ELEC ENG 7070 Electromagnetic Simulations: Practical Aspects	3
COMP SCI 7092 Mobile & Wireless Networks	3
PSYCHOL 7336 Human Factors	3
PSYCHOL 6022 Foundations of Perception and Cognition	3
PSYCHOL 6027 Perception and Cognition	3

2.1.3 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.

Master of Sciences (Defence) (MSc(Def))

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

Overview

The Master of Sciences (Defence) is designed to serve the needs of professionals working in the defence industry, who wish to upgrade their qualifications by undertaking advanced studies in topics related to the defence industry, including a substantial research project.

The Master of Sciences (Defence) is an AQF Level 9 qualification with a standard full-time duration of 1.5 years.

Condition of Admission

Work experience: At least 18 months employment experience in a defence-related industry is required.

1. Academic Program Rules for Master of Sciences (Defence)

There shall be a Master of Sciences (Defence).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Master of Sciences (Defence), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 36 units:

2.1.1 Core Courses

Both of these courses are offered by the University of South Australia:

EEET 5004 Engineering Research Practice	3
EEET 5107 Systems Engineering for Complex Problem Solving	3

2.1.2 Electives

Courses to the value of 18 units from the following:

Defence Technology Specialisation

ELEC ENG 7082 Principles of Control Systems	3
ELEC ENG 7055 Antennas & Propagation.....	3
ELEC ENG 7033 Principles of RF Engineering.....	3
ELEC ENG 7017 Beamforming & Array Processing	3
ELEC ENG 7015 Adaptive Signal Processing	3

ELEC ENG 7002 Kalman Filtering & Tracking	3
ELEC ENG 7060 Image Sensors & Processing	3
ELEC ENG 7070 Electromagnetic Simulations	3
PHYSICS 7010 Non-Linear Optics.....	3
PHYSICS 7540 Optics and Photonics	3
PHYSICS 7007 Fourier Techniques and Applications	3

Information and Communication Technology Specialisation

PHYSICS 7534 Computational Physics.....	3
ELEC ENG 7059 Radar Principles & Systems - An Introduction.....	3
COMP SCI 7076 Distributed Systems	3
COMP SCI 7059 Artificial Intelligence.....	3
STATS 7053 Statistics in Engineering	3
COMP SCI 7039 Computer Networks & Applications	3
COMP SCI 7005 Adaptive Business Intelligence.....	3
COMP SCI 7022 Computer Vision	3
COMP SCI 7093 Evolutionary Computation....	3
ELEC ENG 7070 Electromagnetic Simulations: Practical Aspects.....	3
COMP SCI 7092 Mobile & Wireless Networks.....	3
PSYCHOL 7336 Human Factors.....	3
PSYCHOL 6022 Foundations of Perception and Cognition.....	3
PSYCHOL 6027 Perception and Cognition	3

2.1.3 Research Project

DEFSCI 7016 A/B Master of Sciences (Defence) Research Project Part A & B.....	12
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2.1.4 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.

Graduate Certificate in Sciences (Defence Signal Information Processing) (GCertSc(DefSignalInfProc))

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

Overview

The Graduate Certificate in Sciences (Defence Signal Information Processing) is designed to serve the needs of professional engineers or scientists working in the defence industry, who wish to upgrade their qualifications by undertaking advanced coursework studies in signal and information processing technologies related to the defence industry.

The Graduate Certificate in Sciences (Defence Signal Information Processing) is an AQF Level 8 qualification with a standard full-time duration of 0.5 years.

Condition of Admission

Work experience: Some employment experience in a defence-related industry is required.

1. Academic Program Rules for Graduate Certificate in Sciences (Defence Signal Information Processing)

There shall be a Graduate Certificate in Sciences (Defence Signal Information Processing).

2. Qualification Requirements

2.1 Academic Program

To qualify for the Graduate Certificate in Sciences (Defence Signal Information Processing), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 12 units:

2.1.1 Core Courses

This course is offered by the University of South Australia

EEET 5107 Systems Engineering for Complex Problem Solving 3

2.1.2 Electives

Courses to the value of 9 units from the following:

ELEC ENG 7002 Kalman Filtering and Tracking 3

ELEC ENG 7015 Adaptive Signal Processing 3

ELEC ENG 7059 Radar Principles & Systems: An Introduction..... 3
ELEC ENG 7060 Image Sensors & Processing 3
ELEC ENG 7071 Detection, Estimation & Classification..... 3
COMP SCI 7022 Computer Vision 3
ELEC ENG 7086 Mobile Communications 3

2.1.3 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.

Graduate Diploma in Sciences (Defence Signal Information Processing) (GDipSc(DefSignalInfProc))

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

Overview

The Graduate Diploma in Sciences (Defence Signal Information Processing) is designed to serve the needs of professional engineers or scientists working in the defence industry who wish to upgrade their qualifications by undertaking advanced coursework studies in signal and information processing technologies related to the defence industry.

The Graduate Diploma in Sciences (Defence Signal Information Processing) is an AQF Level 8 qualification with a standard full-time duration of 1 year.

Condition of Admission

Work experience: Have had at least 18 months employment experience in a defence-related industry.

1. Academic Program Rules for Graduate Diploma in Sciences (Defence Signal Information Processing)

There shall be a Graduate Diploma in Sciences (Defence Signal Information Processing).

2. Qualification Requirements

2.1 Academic Program

To qualify for the Graduate Diploma in Sciences (Defence Signal Information Processing), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 24 units:

2.1.1 Core Courses

These courses are offered by the University of South Australia:

EEET 5107 Systems Engineering for Complex Problem Solving	3
EEET 5004 Engineering Research Practice	3

2.1.2 Electives

Courses to the value of 18 units.

At least 12 units from the following:

ELEC ENG 7017 Beamforming and Array Processing	3
ELEC ENG 7002 Kalman Filtering and Tracking	3

ELEC ENG 7071 Detection, Estimation & Classification	3
ELEC ENG 7060 Image Sensors & Processing	3
ELEC ENG 7015 Adaptive Signal Processing	3
ELEC ENG 7059 Radar Principles & Systems: An Introduction	3
plus up to 6 units from the following:	
ELEC ENG 7086 Mobile Communications	3
COMP SCI 7022 Computer Vision	3

2.1.3 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.

Master of Sciences (Defence Signal Information Processing) (MSc(DefSignalInfProc))

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

Overview

The Master of Sciences (Defence Signal Information Processing) is designed to serve the needs of professional engineers or scientists working in the defence industry, who wish to upgrade their qualifications by undertaking advanced studies in signal and information processing technologies related to the defence industry, including a substantial research project.

The Master of Sciences (Defence Signal Information Processing) is an AQF Level 9 qualification with a standard full-time duration of 1.5 years.

Condition of Admission

Work experience: Have had at least 18 months employment experience in a defence-related industry.

1. Academic Program Rules for Master of Sciences (Defence Signal Information Processing)

There shall be a Master of Sciences (Defence Signal Information Processing).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Master of Sciences (Defence Signal Information Processing), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 36 units:

2.1.1 Core Courses

These courses offered by the University of South Australia:

EEET 5004 Engineering Research Practice 3

EEET 5107 Systems Engineering for Complex Problem Solving 3

2.1.2 Electives

Courses to the value of 18 units.

At least 12 units from the following:

ELEC ENG 7070 Electromagnetic Simulations: Practical Aspects 3

ELEC ENG 7002 Kalman Filtering and Tracking 3

ELEC ENG 7071 Detection, Estimation & Classification 3

ELEC ENG 7060 Image Sensors & Processing 3

ELEC ENG 7015 Adaptive Signal Processing 3

ELEC ENG 7059 Radar Principles & Systems: An Introduction 3

plus

Courses to the value of up to 6 units from the following:

ELEC ENG 7086 Mobile Communications 3

COMP SCI 7022 Computer Vision 3

2.1.3 Research Project

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2.1.4 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.

Master of Science (Petroleum Geoscience) (MSc(PetrolGeosc))

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

Overview

The Master of Science (Petroleum Geoscience) program is comprised of comprehensive coursework and research training. The school has strong links with industry, and senior industry personnel teach specialist courses. The program increases student knowledge in the essential areas of Petroleum Geoscience and trains students to use industry-standard techniques and software. Students receive a thorough grounding in the principles of exploration and development geoscience, whilst being exposed to the practical aspects of the oil and gas industry gained by staff through years of experience around the world.

Applicants for the program must have completed an AQF Level 8 (Honours) qualification or an equivalent combination of awards and prior learning.

The Master of Science (Petroleum Geoscience) is an AQF Level 9 qualification with a standard full-time duration of 1 year.

1. Academic Program Rules for Master of Science (Petroleum Geoscience)

There shall be a Master of Science (Petroleum Geoscience).

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Master of Science (Petroleum Geoscience), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 24 units:

2.1.1 Core Courses

PETROGEO 7010 Fundamentals of Petroleum Geoscience I	3
PETROGEO 7011 Fundamentals of Petroleum Geoscience II	3
PETROGEO 7012 Petroleum Resource Evaluation.....	3
PETROGEO 7013 Petroleum Systems and Basin Evaluation.....	3
PETROGEO 7020 Advanced Petroleum Geoscience I	3
PETROGEO 7021 Advanced Petroleum Geoscience II: Seismic.....	3

2.1.2 Research Project

PETROGEO 7022 Petroleum Geoscience: MSc Research Project	6
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2.1.3 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.

Master of Software Engineering (MSoftE)

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

Overview

The Master of Software Engineering aims to provide graduates with the knowledge, tools, and methods for defining software requirements and performing software design, construction, testing and maintenance tasks. Graduates should have the ability to design and construct large software systems and are well placed to secure rewarding technical careers within the software engineering industry.

The Master of Software Engineering is an AQF Level 9 qualification with a standard full-time duration of 2 years.

1. Academic Program Rules for Master of Software Engineering

There shall be a Master of Software Engineering.

2. Qualification Requirements

2.1 Academic Program

To qualify for the degree of Master of Software Engineering, the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 48 units of courses offered by the School of Computer Science:

2.1.1 Core Courses

COMP SCI 7007 Specialised Programming	3
COMP SCI 7015 Software Engineering & Project	3
COMP SCI 7023 Software Process Improvement	3
COMP SCI 7036 Software Engineering in Industry	3

2.1.2 Electives

Courses to the value of at least 21 units from Academic Program Rule 2.1.1 Advanced Electives for the Graduate Certificate in Computer Science.

ELEC ENG 7057 Engineering Communication & Critical Thinking ^	3
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^ Unless exempted by the Faculty, all international students are required to take ELEC ENG 7057 Engineering Communication & Critical Thinking.

2.1.3 Research Projects

COMP SCI 7096A Master of Software Engineering Project Pt A.....	6
COMP SCI 7096B Master of Software Engineering Project Pt B.....	9

2.1.4 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.

Postgraduate Research Degrees

Academic Program Rules for the following Research programs are listed under the Adelaide Graduate Centre.

Master of Philosophy

Professional Doctorates

Doctor of Philosophy

Higher Doctorates

