Program Code
BEDF5

Program Minimum Units
120

Standard Duration
5 Years

Program Faculty
Faculty of Engineering, Computer and Math Sciences

AQF Level
08

Academic Year
2016

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.

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

There shall be a Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Finance (BE(Hons)(Elec&Elec) BFin).

Qualification Requirements

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:

1. Courses to the value of 84 units, including Core courses up to the value of 84 units with Elective courses to the value of 3 units if required, from the Bachelor of Engineering (Honours) (Electrical and Electronic) with the option of a major in one of the following:
2. Finance courses to the value of 36 units, including Core courses to the value of 30 units and Elective courses to the value of 6 units
3. 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
4. Unless exempted, International students are required to take ENG 3003 Engineering Communication EAL in lieu from the major course
5. Students who have not undertaken 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 normal requirements of the Bachelor of Engineering (Honours)

Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Finance

To satisfy the requirements for Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Finance students must complete courses to the value of 120 units.

Electrical and Electronic Core

All of the following courses must be completed:
COMP SCI 1102 Object Oriented Programming (3 units)
COMP SCI 1201 Introduction to Programming for Engineers (3 units)
MATHS 1011 Mathematics IA (3 units)
MATHS 1012 Mathematics IB (3 units)
MATHS 2201 Engineering Mathematics IIA (3 units)
MATHS 2202 Engineering Mathematics IIB (3 units)

ELEC ENG 2100 Digital Systems (3 units)
ELEC ENG 2101 Electronic Circuits (3 units)
ELEC ENG 2102 Electrical Energy Conversions (3 units)
ELEC ENG 2103 Design & Innovation (3 units)
ELEC ENG 2104 Digital Signal Processing (3 units)
ELEC ENG 3100 Systems Engineering (3 units)
ELEC ENG 3101 Control (3 units)
ELEC ENG 3102 Project Management (3 units)
ELEC ENG 3110 Electric Power Systems (3 units)
ELEC ENG 3103 Electromagnetics (3 units)
ELEC ENG 3104 Electric Drive Systems (3 units)
ELEC ENG 3105 Real Time & Embedded Systems (3 units)
ELEC ENG 3106 Design of Radio Frequency Electronics (3 units)
ELEC ENG 4101A Electrical & Electronic Research Project Part 1 (6 units)
ELEC ENG 4101B Electrical & Electronic Research Project Part 2 (3 units)
ELEC ENG 4100 Business Management Systems (3 units)

Electrical and Electronic Electives

Courses to the value of 6 units from the following:
COMP SCI 2103 Algorithm Design & Data Structures for Engineers (3 units)
COMP SCI 3001 Computer Networks & Applications (3 units)
COMP SCI 3004 Operating Systems (3 units)
COMP SCI 3006 Software Engineering & Project (3 units)
ELEC ENG 4058 Power Quality & Condition Monitoring (3 units)
ELEC ENG 4067 Antennas & Propagation (3 units)
ELEC ENG 3109 Digital Microelectronics (3 units)
ELEC ENG 3111 Distributed Generation Technology (3 units)

**Bachelor of Finance Requirements**

All of the following courses must be completed:
- ECON 1009 *International Financial Institutions & Markets I* (3 units)
- ECON 2508 *Financial Economics II* (3 units)
- CORPFIN 2501 *Financial Institutions Management II* (3 units)
- CORPFIN 2502 *Business Valuation II* (3 units)
- CORPFIN 3501 *Portfolio Theory & Management III* (3 units)
- ACCTING 1002 *Introductory Accounting I* (3 units)

and

Courses to the value of 3 units from the following:
- ECON 2504 *Intermediate Econometrics II* (3 units)
- MATHS 2103 *Probability & Statistics II* (3 units)

and

Courses to the value of 3 units from the following:
- MATHS 3012 *Financial Modelling: Tools & Techniques III* (3 units)
- CORPFIN 3502 *Options, Futures & Risk Management III* (3 units)

Courses to the value of 6 units from the following:

**Level III Finance Electives**

Finance Electives may be chosen from those listed in the Program Rules for the degree of Bachelor of Finance

**Bachelor of Engineering (Honours) (Autonomous Systems Major) with Bachelor of Finance**

To satisfy the requirements for Bachelor of Engineering (Honours) (Autonomous Systems Major) with Bachelor of Finance students must complete courses to the value of 120 units.

**Autonomous Systems Core**

All of the following courses must be completed:
- COMP SCI 1102 *Object Oriented Programming* (3 units)
- COMP SCI 1201 *Introduction to Programming for Engineers* (3 units)
- COMP SCI 2103 *Algorithm Design & Data Structures for Engineers* (3 units)
- COMP SCI 3007 *Artificial Intelligence* (3 units)
- MATHS 1011 *Mathematics IA* (3 units)
- MATHS 1012 *Mathematics IB* (3 units)
- MATHS 2201 *Engineering Mathematics IIA* (3 units)
- MATHS 2202 *Engineering Mathematics IIB* (3 units)
- ELEC ENG 2100 Digital Systems (3 units)
- ELEC ENG 2101 Electronic Circuits (3 units)
- ELEC ENG 2103 Design & Innovation (3 units)
- ELEC ENG 2104 Digital Signal Processing (3 units)
- ELEC ENG 2102 Electric Energy Conversion (3 units)
- ELEC ENG 3101 Control (3 units)
- ELEC ENG 3104 Electric Drive Systems (3 units)
- ELEC ENG 3105 Real Time & Embedded Systems (3 units)
- ELEC ENG 3107 Autonomous Systems (3 units)
ELEC ENG 3100 Systems Engineering (3 units)
ELEC ENG 3102 Project Management (3 units)
ELEC ENG 4102A Autonomous Systems Research Project Part 1 (6 units)
ELEC ENG 4102B Autonomous Systems Research Project Part 2 (3 units)
ELEC ENG 4100 Business Management Systems (3 units)

**Autonomous Systems Electives**
COMP SCI 3006 Software Engineering & Project (3 units)
COMP SCI 3016 Computational Cognitive Science (3 units)
COMP SCI 4022 Computer Vision (3 units)
COMP SCI 3014 Computer Graphics (3 units)
ELEC ENG 4061 Image Processing (3 units)

**Bachelor of Finance Requirements**
All of the following courses must be completed:
ACCTING 1002 Introductory Accounting I (3 units)
ECON 1009 International Financial Institutions & Markets I (3 units)
ECON 2508 Financial Economics II (3 units)
CORPFIN 2501 Financial Institutions Management II (3 units)
CORPFIN 2502 Business Valuation II (3 units)
CORPFIN 3501 Portfolio Theory & Management III (3 units)

and

Courses to the value of 3 units from the following:
ECON 2504 Intermediate Econometrics II (3 units)
MATHS 2103 Probability & Statistics II (3 units)

and

Courses to the value of 3 units from the following:
MATHS 3012 Financial Modelling: Tools & Techniques III (3 units)
CORPFIN 3502 Options, Futures & Risk Management III (3 units)

Courses to the value of 6 units from the following:

Level III Finance Electives
Finance Electives may be chosen from those listed in the Program Rules for the degree of Bachelor of Finance

**Bachelor of Engineering (Honours) (Biodmedical Major) with Bachelor of Finance**
To satisfy the requirements for Bachelor of Engineering (Honours) (Biodmedical Major) with Bachelor of Finance students must complete courses to the value of 120 units.

**Biomedical Core**
All of the following courses must be completed:
COMP SCI 1102 Object Oriented Programming (3 units)
COMP SCI 1201 Introduction to Programming for Engineers (3 units)
MATHS 1011 Mathematics IA (3 units)
MATHS 1012 Mathematics IB (3 units)
MATHS 2201 Engineering Mathematics IIA (3 units)
MATHS 2202 Engineering Mathematics IIB (3 units)
PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems (3 units)
ANAT SC 2200 Functional Human Anatomy II (3 units)
ELEC ENG 2100 Digital Systems (3 units)
ELEC ENG 2101 Electronic Circuits (3 units)
ELEC ENG 2103 Design & Innovation (3 units)
ELEC ENG 2104 Digital Signal Processing (3 units)
ELEC ENG 2102 Electric Energy Conversion (3 units)
ELEC ENG 3100 Systems Engineering (3 units)
ELEC ENG 3101 Control (3 units)
ELEC ENG 3102 Project Management (3 units)
ELEC ENG 3103 Electromagnetics (3 units)
ELEC ENG 3106 Design of Radio Frequency Electronics (3 units)
ELEC ENG 4103A Biomedical Research Project Part 1 (6 units)
ELEC ENG 4103B Biomedical Research Project Part 2 (3 units)
ELEC ENG 4100 Business Management Systems (3 units)
ELEC ENG 4115 Biomedical Instrumentation (3 units)

and

Courses to the value of 6 units from the following:
PHYSIOL 3001 Cellular & Systems Neurobiology (6 units)

or

Biomedical Major Electives (3 units)
PHYSIOL 3120 Neuromotor Control of Human Movement (3 units)

Biomedical Electives

Courses to the value of 3 units from the following:
ELEC ENG 3104 Electric Drive Systems (3 units)
ELEC ENG 3105 Real Time & Embedded Systems (3 units)
COMP SCI 4022 Computer Vision (3 units)
ANAT SC 3103 Functional Human Neuroanatomy (3 units)
ELEC ENG 4061 Image Processing (3 units)

Bachelor of Finance Requirements

All of the following courses must be completed:
ECON 1009 International Financial Institutions & Markets I (3 units)
ECON 2508 Financial Economics II (3 units)
CORPFIN 2502 Business Valuation II (3 units)
CORPFIN 2501 Financial Institutions Management II (3 units)
CORPFIN 3501 Portfolio Theory & Management III (3 units)
ACCTING 1002 Introductory Accounting I (3 units)

and

Courses to the value of 3 units from the following:
MATHS 3012 Financial Modelling: Tools & Techniques III (3 units)
CORPFIN 3502 Options, Futures & Risk Management III (3 units)

and

Courses to the value of 3 units from the following:
ECON 2504 Intermediate Econometrics II (3 units)
MATHS 2103 Probability & Statistics II (3 units)
Courses to the value of 6 units from the following:

Level III Finance Electives

Finance Electives may be chosen from those listed in the Program Rules for the degree of Bachelor of Finance

**Bachelor of Engineering (Honours) (Communication Systems Major) with Bachelor of Finance**

To satisfy the requirements for Bachelor of Engineering (Honours) (Communication Systems Major) with Bachelor of Finance students must complete courses to the value of 120 units.

**Communication Systems Core**

All of the following courses must be completed:

- COMP SCI 1102 Object Oriented Programming (3 units)
- COMP SCI 1201 Introduction to Programming for Engineers (3 units)
- COMP SCI 2103 Algorithm Design & Data Structures for Engineers (3 units)
- COMP SCI 3001 Computer Networks & Applications (3 units)
- MATHS 1011 Mathematics IA (3 units)
- MATHS 1012 Mathematics IB (3 units)
- MATHS 2201 Engineering Mathematics IIA (3 units)
- MATHS 2202 Engineering Mathematics IIB (3 units)
- ELEC ENG 4054 Telecommunications Systems (3 units)

- ELEC ENG 2100 Digital Systems (3 units)
- ELEC ENG 2101 Electronic Circuits (3 units)
- ELEC ENG 2103 Design & Innovation (3 units)
- ELEC ENG 2104 Digital Signal Processing (3 units)
- ELEC ENG 2102 Electric Energy Conversion (3 units)
- ELEC ENG 3100 Systems Engineering (3 units)
- ELEC ENG 3101 Control (3 units)
- ELEC ENG 3102 Project Management (3 units)
- ELEC ENG 3103 Electromagnetics (3 units)
- ELEC ENG 3106 Design of Radio Frequency Electronics (3 units)
- ELEC ENG 3108 Telecommunications Principles (3 units)
- ELEC ENG 4104A Communications Systems Research Project Part 1 (6 units)
- ELEC ENG 4104B Communications Systems Research Project Part 2 (3 units)
- ELEC ENG 4100 Business Management Systems (3 units)
- ELEC ENG 4054 Telecommunications Systems (3 units)

**Communication Systems Electives**

Courses to the value of 3 units from the following:

- ELEC ENG 3105 Real Time & Embedded Systems (3 units)
- ELEC ENG 4067 Antennas & Propagation (3 units)

**Bachelor of Finance Requirements**

All of the following courses must be completed:

- ECON 1009 International Financial Institutions & Markets I (3 units)
- ECON 2508 Financial Economics II (3 units)
- CORPFIN 2501 Financial Institutions Management II (3 units)
- CORPFIN 2502 Business Valuation II (3 units)
- CORPFIN 3501 Portfolio Theory & Management III (3 units)
ACCTING 1002  *Introductory Accounting I* (3 units)

and

Courses to the value of 3 units from the following:
MATHS 3012  *Financial Modelling: Tools & Techniques III* (3 units)
CORPFIN 3502  *Options, Futures & Risk Management III* (3 units)

and

Courses to the value of 3 units from the following:
ECON 2504  *Intermediate Econometrics II* (3 units)
MATHS 2103  *Probability & Statistics II* (3 units)

Courses to the value of 6 units from the following:

Level III Finance Electives

Finance Electives may be chosen from those listed in the Program Rules for the degree of Bachelor of Finance

**Bachelor of Engineering (Honours) (Computer Engineering Major) with Bachelor of Finance**

To satisfy the requirements for Bachelor of Engineering (Honours) (Computer Engineering Major) with Bachelor of Finance students must complete courses to the value of 120 units.

**Computer Engineering Core**

All of the following courses must be completed:
COMP SCI 1102  *Object Oriented Programming* (3 units)
COMP SCI 1201  *Introduction to Programming for Engineers* (3 units)
COMP SCI 2103  *Algorithm Design & Data Structures for Engineers* (3 units)
COMP SCI 3001  *Computer Networks & Applications* (3 units)
COMP SCI 3005  *Computer Architecture* (3 units)
MATHS 1011  *Mathematics IA* (3 units)
MATHS 1012  *Mathematics IB* (3 units)
MATHS 2201  *Engineering Mathematics IIA* (3 units)
MATHS 2202  *Engineering Mathematics IIB* (3 units)
ELEC ENG 2100 Digital Systems (3 units)
ELEC ENG 2101 Electronic Circuits (3 units)
ELEC ENG 2103 Design & Innovation (3 units)
ELEC ENG 2104 Digital Signal Processing (3 units)
ELEC ENG 2102 Electric Energy Conversion (3 units)
ELEC ENG 3101 Control (3 units)
ELEC ENG 3105 Real Time & Embedded Systems (3 units)
ELEC ENG 3109 Digital Microelectronics (3 units)
ELEC ENG 3100 Systems Engineering (3 units)
ELEC ENG 3102 Project Management (3 units)
ELEC ENG 4105A Computer Engineering Research Project Part 1 (6 units)
ELEC ENG 4105B Computer Engineering Research Project Part 2 (3 units)
ELEC ENG 4100 Business Management Systems (3 units)

**Computer Engineering Electives**

Courses to the value of 6 units from the following:
COMP SCI 3004 Operating Systems (3 units)
COMP SCI 3006 Software Engineering & Project (3 units)
COMP SCI 3014 Computer Graphics (3 units)

ELEC ENG 3104 Electric Drive Systems (3 units)

Bachelor of Finance Requirements

All of the following courses must be completed:
ECON 1009 International Financial Institutions & Markets I (3 units)
ECON 2508 Financial Economics II (3 units)
ACCTING 1002 Introductory Accounting I (3 units)
CORPFIN 2501 Financial Institutions Management II (3 units)
CORPFIN 3501 Portfolio Theory & Management III (3 units)
CORPFIN 2502 Business Valuation II (3 units)

and

Courses to the value of 3 units from the following:
ECON 2504 Intermediate Econometrics II (3 units)
MATHS 2103 Probability & Statistics II (3 units)

and

Courses to the value of 3 units from the following:
MATHS 3012 Financial Modelling: Tools & Techniques III (3 units)
CORPFIN 3502 Options, Futures & Risk Management III (3 units)

Courses to the value of 6 units from the following:

Level III Finance Electives

Finance electives may be chosen from those listed in the program rules for the degree of Bachelor of Finance

Bachelor of Engineering (Honours) (Renewable Energy Major) with Bachelor of Finance

To satisfy the requirements for Bachelor of Engineering (Honours) (Renewable Energy Major) with Bachelor of Finance students must complete courses to the value of 120 units.

Renewable Energy Core

All of the following courses must be completed:
COMP SCI 1102 Object Oriented Programming (3 units)
COMP SCI 1201 Introduction to Programming for Engineers (3 units)
MATHS 1011 Mathematics IA (3 units)
MATHS 1012 Mathematics IB (3 units)
MATHS 2201 Engineering Mathematics IIA (3 units)
MATHS 2202 Engineering Mathematics IIB (3 units)
MECH ENG 4144 Renewable Fluid Power Technology (3 units)
MECH ENG 4145 Sustainable Thermal Technologies (3 units)
ELEC ENG 2100 Digital Systems (3 units)
ELEC ENG 2101 Electronic Circuits (3 units)
ELEC ENG 2102 Electric Energy Conversion (3 units)
ELEC ENG 2103 Design & Innovation (3 units)
ELEC ENG 2104 Digital Signal Processing (3 units)
ELEC ENG 3100 Systems Engineering (3 units)
ELEC ENG 3101 Control (3 units)
ELEC ENG 3102 Project Management (3 units)
ELEC ENG 3104 Electric Drive Systems (3 units)
ELEC ENG 3110 Electric Power Systems (3 units)
ELEC ENG 3111 Distributed Generation Technology (3 units)
ELEC ENG 4100 Business Management Systems (3 units)
ELEC ENG 4106A Renewable Energy Research Project Part 1 (6 units)
ELEC ENG 4106B Renewable Energy Research Project Part 2 (3 units)

Renewable Energy Electives

Courses to the value of 6 units from the following:
ELEC ENG 4058 Power Quality & Condition Monitoring (3 units)
ELEC ENG 3103 Electromagnetics (3 units)
ELEC ENG 3105 Real Time & Embedded Systems (3 units)
ELEC ENG 3108 Telecommunications Principles (3 units)

Bachelor of Finance Requirements

All of the following courses must be completed:
ECON 1009 International Financial Institutions & Markets I (3 units)
ECON 2508 Financial Economics II (3 units)
CORPFIN 2502 Business Valuation II (3 units)
CORPFIN 2501 Financial Institutions Management II (3 units)
CORPFIN 3501 Portfolio Theory & Management III (3 units)
ACCTING 1002 Introductory Accounting I (3 units)

and

Courses to the value of 3 units from the following:
ECON 2504 Intermediate Econometrics II (3 units)
MATHS 2103 Probability & Statistics II (3 units)

and

Courses to the value of 3 units from the following:
MATHS 3012 Financial Modelling: Tools & Techniques III (3 units)
CORPFIN 3502 Options, Futures & Risk Management III (3 units)

Courses to the value of 6 units from the following:
Level III Finance Electives

Finance electives may be chosen from those listed in the program rules for the degree of Bachelor of Finance

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