

# Bachelor of Electrical & Electronic Engineering (Honours)/Bachelor of Science

## PHYSICS MAJOR



Commencing in Semester 2, 2019



Studying at Callaghan

See the next page for some helpful hints & tips!



This Program Plan is an enrolment guide to ensure you are on track to graduate. If at any time you wish to vary from this program plan seek prior advice from your [Program Advisor](#) to ensure you remain on track.

### Semester 1

Year 1

<a href="#">ENGG1003</a> Introduction to Procedural Programming	<a href="#">ENGG1500</a> Introduction to Professional Engineering	<a href="#">MATH1120</a> Mathematics for Engineering, Science and Technology 2	<a href="#">ELEC2320</a> Electrical and Electronic Circuits
--	--	---	--

Year 3

<a href="#">ENGG2500</a> Sustainable Engineering Practice	<a href="#">ELEC2720</a> Introduction to Embedded Computing	<a href="#">SCIE1001</a> Professional Scientific Thinking	<a href="#">SCIE1002</a> Multidisciplinary Laboratories
--	--	--	--

Year 4

<a href="#">ENGG3500</a> Managing Engineering Projects	<a href="#">ELEC3130</a> Electric Machines and Power Systems	<a href="#">PHYS2111</a> Classical Physics 1	<a href="#">ELECTIVE</a>
---	---	---	--------------------------

Year 5

<a href="#">ENGG3440</a> Linear Control and Estimation	<a href="#">PHYS2211</a> Modern Physics 1	<a href="#">DIRECTED</a> Engineering	<a href="#">ELECTIVE</a>
---	--	---	--------------------------

Year 6

<a href="#">ELEC4840B</a> Final Year Engineering Project Part B (20 units) <i>This course <b>must</b> be taken following ELEC4840A</i>	<a href="#">PHYS3112</a> Photonics	<a href="#">PHYS3111</a> Biophysics
--	---------------------------------------	--

### Semester 2

<a href="#">ELEC1310</a> Introduction to Electrical Engineering	<a href="#">ELEC1710</a> Digital and Computer Electronics 1	<a href="#">MATH1110</a> * Mathematics for Engineering, Science and Technology 1	<a href="#">PHYS1210</a> Advanced Physics I
--	--	---	--

<a href="#">PHYS1220</a> Advanced Physics II	<a href="#">ELEC2430</a> Circuits and Signals	<a href="#">MATH2310</a> Calculus of Science and Engineering	<a href="#">STAT2110</a> Engineering Statistics
---	--	---	--

<a href="#">ELEC2132</a> Electric Energy Systems	<a href="#">ENGG2440</a> Modelling and Control	<a href="#">SCIE2002</a> Interdisciplinary Challenges	<a href="#">PHYS2112</a> Classical Physics 2
---	---	--	---

<a href="#">ELEC3850</a> Electrical Engineering Design and Practice	<a href="#">ELEC3540</a> Analog and Digital Communications	<a href="#">ELEC3240</a> Analog Electronics	<a href="#">MATH3242</a> Complex Analysis Or <a href="#">MATH3820</a> Numerical Methods
--	---	--	---

<a href="#">ELEC4840A</a> Final Year Engineering Project Part A	<a href="#">ENGG4500</a> Engineering Complexity	<a href="#">PHYS3211</a> Quantum Information Science	<a href="#">DIRECTED</a> Engineering
--	--	---	---

Program Plan Key: = Core = Major = Elective  
 = [Compulsory Program Requirement](#) = Directed

Professional Practice: Industrial Experience 12 weeks

To be eligible to graduate make sure you have completed 400 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

✓ Core courses - 290 units.

\* Enrolment in MATH courses is based on your assumed knowledge. To find out which MATH courses you should enrol in please see the [Enrolling in Maths information](#). More information in your [Program Handbook](#).

✓ Physics Major courses - 70 units. Consisting of:

- 60 units of compulsory courses
- 10 units of directed courses for the Physics major – MATH3242 or MATH3820

✓ Directed courses – 20 units of Engineering directed courses.

✓ Elective courses - 20 units.

✓ It is also a requirement that students complete a total of 12 weeks of [industrial experience](#).

✓ The duration of this program is 5 years full time (40 units per semester) or part time equivalent.

✓ The maximum time to complete this program is 12 years.

See the  
next page  
for a list of  
Directed  
courses



Some courses have assumed knowledge and/or requisites, please refer to the individual [Course Handbook](#).

The [Program Handbook](#) has valuable information on program structure and requirements, if you are intending on studying part time or varying from this program plan please seek prior advice from your [Program Advisor](#).

# Bachelor of Electrical & Electronic Engineering (Honours) / Bachelor of Science – Physics Major

## Directed Courses

Subject to change - Please refer to the program handbook for up to date information.

Choose **10 units** of 3000 level courses

- [MATH3242](#) Complex Analysis
- [MATH3820](#) Numerical Methods

Choose **20 units** of Engineering directed courses.

- [ELEC3160](#) Principles and Design of Off-Grid Power Systems
- [ELEC3251](#) Power Electronics and Renewable Energy Systems
- [ELEC3400](#) Signal Processing
- [ELEC3500](#) Telecommunication Networks
- [ELEC4100](#) Electrical Systems
- [ELEC4160](#) Advanced Drives and Power Electronics
- [ELEC4210](#) Electronics Design
- [ELEC4700](#) Advanced Computer Systems
- [ELEC4550](#) Wireless Communication
- [ELEC4720](#) Programmable Logic Design
- [ENGG4440](#) Nonlinear Control and Estimation

# Helpful Hints & Tips

## ENROLMENT HELP



Need help? >>  
**Ask UON >>**



How do I use the Web Timetable? >>

### RULES

It is important to follow this Program Plan.  
You cannot repeat a course you've passed to try and get a better grade.  
You cannot enrol in any extra courses not required by your program >>

## INFO FOR NEW STUDENTS



First year undergraduate students usually only enrol in 1000 level courses >>

New Postgraduate students should only enrol in 6000 level courses >>



Find out all you need to know about getting started at uni >>

## UNDERSTANDING COURSES & PROGRAMS



Not sure what courses to study? >>



Understanding program and course jargon >>



Understanding UON Jargon >>

## PRIOR STUDY



Check you have met the assumed knowledge and prerequisites for courses before enrolling >>



Have you studied elsewhere or transferred programs? Don't forget to apply for credit >>

## CONSIDERING A BREAK?



Need to take a break? This is called a 'leave of absence'. Check if you are eligible >>



Planning on going overseas? Keep electives free, so it's easier for you to receive credit for your overseas studies >>



UON offers a range of support services to assist with your health and wellbeing >>

## MORE QUESTIONS?

We are here to answer questions about your program. Talk to us your way!

- Ask UON
- 1300 ASK UON
- Visit Student Central
- Message us on Facebook
- or Twitter
- UONline via myUON