

# Bachelor of Engineering (Honours) (Computer Systems)/Bachelor of Science PHYSICS MAJOR

 **Commencing in 2017**

 **Studying at Callaghan**

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.

See the  
next page  
for some  
helpful hints  
& tips!



	Semester 1				Semester 2			
Year 1	<a href="#">ENGG1003</a> Introduction to Procedural Programming	<a href="#">SENG1110</a> Object Orientated Programming	<a href="#">MATH1110*</a> Mathematics for Engineering, Science and Technology 1	<a href="#">PHYS1210</a> Advanced Physics I	<a href="#">ELEC1710</a> Digital and Computer Electronics 1	<a href="#">ELEC1310</a> Introduction to Electrical Engineering	<a href="#">MATH1120</a> Mathematics for Engineering, Science and Technology 2	<a href="#">PHYS1220</a> Advanced Physics II
Year 2	<a href="#">ENGG1500</a> Introduction to Professional Engineering	<a href="#">STAT1070</a> Statistics for the Sciences	<a href="#">MATH2310</a> Calculus of Science and Engineering	<a href="#">SENG2050</a> Web Engineering	<a href="#">SENG1050</a> Web Technologies	<a href="#">SENG1120</a> Data Structures	<a href="#">SENG2250</a> Computing Security	<a href="#">PHYS2260</a> Electromagnetism
Year 3	<a href="#">ELEC2430</a> Circuits and Signals	<a href="#">PHYS2170</a> Quantum Mechanics and Semiconductor Physics	<a href="#">ENGG2500</a> Sustainable Engineering Practice	<a href="#">DIRECTED</a> Physics 2000 level	<a href="#">ELEC2320</a> Electrical and Electronic Circuits	<a href="#">COMP2240</a> Operating Systems	<a href="#">DIRECTED</a> Physics 2000 level	<a href="#">DIRECTED</a> Physics 3000 level
Year 4	<a href="#">ELEC3240</a> Analog Electronics	<a href="#">ENGG3500</a> Managing Engineering Projects	<a href="#">ELEC3730</a> Digital and Computer Electronics 2	<a href="#">DIRECTED</a> Physics 3000 level	<a href="#">ELEC3540</a> Analog and Digital Communications	<a href="#">ELEC3850</a> Introduction to Electrical Engineering Design	<a href="#">DIRECTED</a> Physics 3000 level	<a href="#">DIRECTED</a> Physics 3000 level
Year 5	<a href="#">ELEC3500</a> Telecommunication Networks	<a href="#">ELEC4840A</a> Final Year Project Part A	<a href="#">ENGG4500</a> Engineering Complexity	<a href="#">DIRECTED</a> Physics 3000 level	<a href="#">ELEC4840B</a> Final Year Project Part B (20 units) <i>This course <b>must</b> be taken following ELEC4840A</i>	<a href="#">SENG3400</a> Network and Distributed Computing	<a href="#">ELEC4720</a> Programmable Logic Design	<a href="#">DIRECTED</a> Physics 3000 level

**Program Plan Key:**  = Core  = Directed

To be eligible to graduate make sure you have completed 410 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

- ✓ Core courses – 330 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](#).
- ✓ Directed courses – 80 units (20 units at 2000 level and 60 units at 3000 level.)
- ✓ 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 or part time equivalent.
- ✓ The maximum time to complete this program is 12 years.



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](#).

See the  
next page  
for a list of  
Directed  
courses

# Bachelor of Engineering (Honours) (Computer Systems) / Bachelor of Science – Physics Major

## Directed Courses

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

Choose **80 units** from the following B Science – Physics Directed list.

Choose **20 units** from the following 2000 level Directed courses:

- [PHYS2160](#) Modern Optics
- [PHYS2240](#) Atomic and Nuclear Physics
- [PHYS2250](#) Classical Mechanics and Special Relativity

Choose **60 units** from the following 3000 level Directed courses:

- [PHYS3310](#) Lasers and Applications
- [PHYS3330](#) Industrial Project and Seminar
- [PHYS3345](#) Optical Fibre Technology
- [PHYS3350](#) Quantum, Atomic and Molecular Physics
- [PHYS3360](#) Advanced Electromagnetism
- [PHYS3375](#) Statistical Mechanics and Transport Processes
- [PHYS3390](#) Solid State and Nanoscience
- [PHYS3990](#) Specialist Topics in Physics
- [MATH3242](#) Complex Analysis
- [MATH3820](#) Numerical Methods
- [MATH3830](#) Operations Research 2
- [MATH3840](#) Optimisation in Business and Industry
- [STAT3100](#) Total Quality Management
- [STAT3170](#) Surveys and Experiments
- [PHIL3070](#) Scientific Knowledge and Scientific Method

# 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 requisites 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 a Student Hub
- Message us on Facebook
- or Twitter
- UONline via myUON