2 Year Course Study Plan – Commencing Semester 1

Level 4 and 5 prerequisites apply to all students.

The Level 1, 2 and 3 prerequisites listed below apply to students undertaking preparatory units in the 2 – 3 year MPE. You must complete any undergraduate pathway units in the first 48 points of the MPE.

Students enrolling in the 2-year MPE with 48 points block credit or relevant Engineering Science pathway have already satisfied the Level 1, 2 and 3 prerequisites.

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| **Year 1** |
| *It is recommended students undertake some practical work experience during the summer break to satisfy the GENG5010 Professional Engineering Portfolio* |
| Semester 1 | ELEC4401Circuits and Electronic Systems Prereq: MATH3023 Advanced Mathematics Applications& ENSC3021 Circuits and Electronics | ELEC4404Signal ProcessingPrereq: MATH3023 Advanced Mathematics Applications & ENSC3015 Signals and Systems& a unit on programming | ELEC4505Power System AnalysisPrereq: ENSC3016 Power and Machines | GENG5505Project Management and Engineering Practice |
| Semester 2 | ELEC4402 Communications SystemsPrereq: MATH3023 Advanced Mathematics Applications & ENSC3015 Signals and Systems | ELEC4406Digital System DesignPrereq: ENSC3020 Digital Embedded Systems | GENG4402Control Engineering | GENG5507Risk, Reliability and Safety |
| *It is recommended students undertake some practical work experience during the summer break to satisfy the GENG5010 Professional Engineering Portfolio* |
| **Year 2** |
| Semester 1 | GENG5511Engineering Research Project Part 1Prereq: Completion of 24 points of L4/L5 units | ELEC5551Electrical & Electronic Engineering Design Project 1Prereq: Completion of 24 points of L4/L5 units Coreq: GENG5505 | OPTION | OPTION |
| Semester 2 | GENG5512Engineering Research Project Part 2Prereq: GENG5511[taken in semester after GENG5511] | ELEC5552Electrical & Electronic Engineering Design Project 2Prereq: ELEC5551 | OPTION | OPTION |
| *Students must complete all credit bearing units and GENG5010 Professional Engineering Portfolio to be eligible to graduate* |

*unit is available in Semester 1 and Semester 2;* N/A = unit not available for 2024*;* NS = unit is delivered during a non-standard teaching period.

Refer to Table of Options overleaf.

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| **Students take units to a total value of 24 points from Group A or take units to a total value of 18 points from Group A and 6 points from Group B:** |
| **GROUP A OPTIONS** | **GROUP B OPTIONS** |
| AUTO4508 Mobile Robots (S1)Prereq: unit on programming | BMEG4001 Biomedical Instrumentation (S2)Prereq: ENSC3015 Signals and Systems |
| ELEC5501 Advanced Communications (S2)Prereq: ELEC4402 | CITS4402 Computer Vision (S1)Prereq: unit on programming |
| ELEC5502 Analogue Electronics (N/A)Prereq: ELEC4401 | CITS4404 Artificial Intelligence and Adaptive Systems (S2)Prereq: unit on programming |
| ELEC5503 Digital Microelectronics System Design (S1)Prereq: ENSC3020 Digital Embedded Systems | CITS4419 Mobile and Wireless Computing (S1)Prereq: unit on computer networks |
| ELEC5504 Power Electronics (S1)Prereq: ENSC3021 Circuits and Electronics | ELEC5509 Grid Integration of Renewable Energy (S2)Prereq: ENSC3016 Power and Machines |
| ELEC5506 Process Instrumentation and Control (S1)Prereq: ENSC2003 Electrical Engineering Fundamentals | ELEC5510 Design and Analysis of Smart Grids and Microgrids (S1)Prereq: ENSC3016 Power and Machines |
| ELEC5508 Semiconductor Nanoelectronics (S1)Prereq: ENSC3014 Electronic Materials and Devices | GENG4405 Numerical Methods and Modelling (S2)Prereq: unit on programming |
| GENG5503 Modern Control Systems (S2) | GENG5516 Energy Storage Systems (S1)Prereq: unit on thermodynamics |
| GENG5506 Renewable Energy (S2)Prereq: ENSC2003 Electrical Engineering Fundamentals | SCIE5516 Materials Characterisation for Bioengineering Applications (S1) |
|  | BUSN5100 Applied Professional Business Communications (S1, S2)Note: only to be taken in first 48 points |
|  | SVLG5003 Wicked Problems (N/A)Note: Enrolment in this unit is subject to approval by the unit coordinators |

*unit is available in Semester 1 and Semester 2;* N/A = unit not available for 2024*;* NS = unit is delivered during a non-standard teaching period

 Programming-based units are: [CITS2005](https://handbooks.uwa.edu.au/unitdetails?code=CITS2005) Object Oriented Programming; [CITS1401](https://handbooks.uwa.edu.au/unitdetails?code=CITS1401) Computational Thinking with Python; [CITS2002](https://handbooks.uwa.edu.au/unitdetails?code=CITS2002) Systems Programming; [CITS2200](https://handbooks.uwa.edu.au/unitdetails?code=CITS2200) Data Structures and Algorithms; [CITS2401](https://handbooks.uwa.edu.au/unitdetails?code=CITS2401) Computer Analysis and Visualisation; [CITS2402](https://handbooks.uwa.edu.au/unitdetails?code=CITS2402) Introduction to Data Science; and [CITS4009](https://handbooks.uwa.edu.au/unitdetails?code=CITS4009) Computational Data Analysis.

The Rules for the 62550 Master of Professional Engineering can be found at: <https://handbooks.uwa.edu.au/coursedetails?code=62550#rules>

All units have a value of six points unless otherwise stated.

Information about unit availability should be checked at the beginning of each semester and can be found at: [timetable.uwa.edu.au](http://www.timetable.uwa.edu.au/) or [Handbooks.](https://handbooks.uwa.edu.au/)

Further Help!

Refer to the UniStart website for your step-by-step guide on planning your enrolment: [uwa.edu.au/unistart.](https://www.uwa.edu.au/unistart) If you need to discuss your study plan further, please contact the EMS Student Service and Engagement Office via AskUWA.