

# 62550 Master of Professional Engineering Mechanical Engineering (SP-EMECH)

## 2 Year Course Study Plan – Commencing Semester 1, 2021

The Level 1, 2 and 3 prerequisites listed below apply to students undertaking preparatory units in the 2 – 3 year MPE.  
Students enrolling in the 2-year MPE with 48 points block credit have already satisfied the Level 1, 2 and 3 prerequisites.  
Level 4 and 5 prerequisites apply to all students.

| Year 1  |   |  |   |   |
|---|---|--|---|---|
| Semester 1,<br>2021   | MECH4428<br>Degradation of Materials<br><i>Prereq: ENSC1002 and ENSC3002</i>                | MECH4429<br>Applied Engineering Thermodynamics<br><i>Prereq: MATH1011, MATH1012, PHYS1001 and ENSC2002</i> | GENG5505*<br>Project Management and Engineering Practice<br><i>Prereq: ENSC1003</i>   | GENG5507*<br>Risk, Reliability and Safety<br><i>Prereq: MATH1011 and MATH1012</i>   |
| Semester 2,<br>2021   | GENG4405<br>Numerical Methods and Modelling<br><i>Prereq: CITS2401</i>                      | MECH4424<br>Measurement and Noise<br><i>Prereq: CITS2401, ENSC2001 and ENSC3001</i>                        | MECH4426#<br>Dynamics, Vibration and Sound<br><i>Prereq: MATH1001 and ENS2001</i>   | MECH5502<br>Analysis and Design of Machine Components<br><i>Prereq: ENSC1002, MATH1011, MATH1012, ENSC3001, ENSC3002 and ENSC3004 (Coreq: CITS2401)</i> |
| <i>It is recommended students undertake some practical work experience during the summer break to satisfy the GENG5010 Professional Engineering Portfolio</i> |   |  |   |   |
| Year 2  |   |  |   |   |
| Semester 1,<br>2022   | GENG5511*<br>Engineering Research Project Part 1<br><i>Prereq: 24 points of L4/L5 units</i> | GENG5514<br>Finite Element Method<br><i>Prereq: ENSC3003, ENSC3004 and GENG4405</i>                        | MECH5551<br>Mechanical Eng. Design Project 1<br><i>Prereq: MATH1011, MATH1012, ENSC1001, ENSC1002, ENSC3001, ENSC3002, ENSC3003, ENSC3004 and MECH5502</i><br><i>Coreq: MECH4429 and GENG5505</i> | OPTION  |
| Semester 2,<br>2022   | GENG5512*<br>Engineering Research Project Part 2<br><i>Prereq: GENG5511</i>                 | GENG4402<br>Control Engineering<br><i>Prereq: MATH1001 and ENSC2001</i>                                    | MECH5552<br>Mechanical Eng. Design Project 2<br><i>Prereq: MECH5551 (Coreq: GENG5505)</i>   | OPTION  |
| <i>It is recommended students undertake some practical work experience during the summer break to satisfy the GENG5010 Professional Engineering Portfolio</i> |   |  |   |   |

\* unit is available in Semester 1 and Semester 2;

# NOTE: MECH4426 will be offered in Semester 1 from 2022 onwards

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| Group A Options  |   |
|--|---|
| Students take units to the value of 12 points from this group                              |   |
| BMEG4002 Biomaterials (S1)   | GENG5503 Modern Control Systems (S2)<br>Prereq: GENG4402, MATH1001 and ENSC2001                                       |
| BMEG4003 Cardiovascular Biomechanics (S2)<br>Prereq: PHYL2002 and ENSC3023                 | GENG5504 Petroleum Engineering (S2)<br>Prereq: ENSC3003   |
| BUSN5100 Applied Professional Business Communications (S1, S2)                             | GENG5506 Renewable Energy (S2)<br>Prereq: ENSC2002 and MATH1002   |
| CHPR4405 Particle Mechanics and Solids Handling (S1)<br>Prereq: ENSC3003 (Coreq: ENSC3007) | GENG5508 Robotics (S1)<br>Prereq: CITS1001 or CITS1401 or CITS2002 or CITS2401  |
| CHPR4407 Transport Phenomena (S2)<br>Prereq: ENSC3003 (Coreq: ENSC3007)                    | MECH5501 Applied Acoustics (N/A)  |
| CIVL5505 Introduction to Design of Offshore Systems (S2)                                   | MECH5504 Design and Failure Analysis of Materials (S2)<br>Prereq: ENSC1002, MATH1011, MATH1012, ENSC3002 and ENSC3004 |
| ENVE4405 Ecological Engineering (S1)   | OCEN4007 Renewable Ocean Energy (S2)<br>Prereq: ENSC3003 or ENSC3010  |
| ENVE5502 Wastewater Engineering: Treatment and Resource Recovery (NS)                      | OCEN5002 Ocean Engineering and Technology (NS)  |
| GENG4403 Extractive Metallurgy (S1)  | SCIE5516 Materials Characterisation for Bioengineering Applications (S1)  |
| GENG5501 Coastal and Offshore Engineering (S1)<br>Prereq: ENSC3003 or ENSC3010             | SVLG5003 Wicked Problems (N/A)<br>Enrolment in this unit is subject to approval by the unit coordinators.             |

**KEY:** S1 = unit is available semester 1; S2 = unit is available semester 2; N/A = unit not available for 2021; NS = unit is delivered during a non-standard teaching period.

The Rules for the 62550 Master of Professional Engineering can be found at: [handbooks.uwa.edu.au/rules-62550-MPE](http://handbooks.uwa.edu.au/rules-62550-MPE)

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://timetable.uwa.edu.au) or [Handbooks](#).

### Further Help!

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