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| **Year 1** | | | | |
| *Students must complete* ***GENG1000 Engineering Practice 1*** *within their first year (0 points = 1 week module)* | | | | |
| Semester 2,  2024 | **MATH1722\*\***  Mathematics Foundations: Specialist  ***Prereq: Maths Methods ATAR or MATH1721 – see notes*** | ***CHEM1003****\*\* Intro Chemistry*  ***OR***  ***PHYS1030\*\**** *Bridging Physics*  ***Prereq: Maths Methods ATAR or MATH1721 or MATH1722 – see notes*** | **GENG1101**  Engineering Drawings | **GENG1010\*\***  Introduction to Engineering |
| Semester 1,  2025 | **MATH1011\*\***  Multivariable Calculus  ***Prereq: Math Specialist ATAR or MATH1722*** | **ENSC2004\*\***  Engineering Mechanics  ***Prereq: (Phys ATAR or PHYS1030) &***  ***(Math Specialist ATAR or MATH1722)***  ***Coreq: MATH1011***  ***APS: PHYS1001 and MATH1011*** | **PHYS1001\*\***  Physics for Scientists & Engineers  ***Prereq: (Physics ATAR or PHYS1030) & (Math Methods ATAR or MATH1721)***  ***Coreq: MATH1722*** | **CITS2401**\*\*  Computer Analysis & Visualisation  ***Prereq: Math Methods ATAR or MATH1721*** |
| **Year 2** | | | | |
| Students must complete **GENG2000 Engineering Practice 2** within their second year (0 points = 1 week module) | | | | |
| Semester 2,  2025 | **MATH1012\*\***  Mathematical Theory & Methods  ***Prereq: Math Specialist ATAR or MATH1722*** | **MECH3024**  Engineering Thermodynamics  ***Prereq: CITS2401 & ENSC2004***  ***APS: PHYS1001*** | **ENSC1004**  Engineering Materials  ***Prereq: (Chem ATAR or CHEM1003) &***  ***(Maths Methods ATAR or MATH1721) &***  ***(Phys ATAR or PHYS1030)*** | Broadening |
| Semester 1,  2026 | **GENG2004**  Solid Mechanics  ***Prereq: ENSC2004 & MATH1011 & MATH1012*** | **GENG2003**  Fluid Mechanics  ***Prereq: MATH1011 & MATH1012 & PHYS1001*** | **MECH2002**  Engineering Materials 2  ***Prereq: ENSC1004*** | **ENSC2003\*\***  Eng. Electrical Fundamentals  ***Prereq: (Phys ATAR or PHYS1030) & MATH1011 Coreq: MATH1012 APS: PHYS1001*** |
| **Year 3** | | | | |
| Students must complete **GENG3000 Engineering Practice** 3 within their third year (0 points = 1 week module) | | | | |
| Semester 2,  2026 | **MATH3023**  Adv. Mathematics Applications  ***Prereq: MATH1011***  ***Coreq: MATH1012*** | **MECH2004**  Engineering Dynamics  ***Prereq: ENSC2004 & MATH1011 & MATH1012***  ***APS: PHYS1001*** | **GENG3405**  Numerical Methods & Modelling  ***Prereq: MATH1012 & CITS2401*** | **GENG3402**  Control Engineering  ***Prereq: MATH1011 & MATH1012*** |
| Semester 1,  2027 | **MECH4426**  Dynamics, Vibration & Sound  ***Prereq: ENSC2004 & MECH2004*** | **MECH4429**  Applied Eng. Thermodynamics  ***Prereq: MECH3024*** | **MECH3002**  Materials & Manufacturing  ***Prereq: GENG2000 & MECH2002*** | Broadening |
| **Year 4** | | | | |
| Students must undertake practical work experience to satisfy **GENG5010 Professional Engineering Portfolio** (0 points)  *Students must achieve a WAM of at least 50 in order to progress to the fourth (Honours) year – see BE(Hons) rules* | | | | |
| Semester 2,  2027 | **MECH3424**  Measurement & Instrumentation  ***Prereq: (CITS1401 or CITS2401) & ENSC2004 & MATH1012 & GENG2000*** | **MECH3001** Mechanisms & Machines  ***Prereq: (CITS1401 or CITS2401) & MECH2004*** | **MECH4502**  Analysis and Design of Machine Components  ***Prereq: CITS2401 & GENG2004 &***  ***MECH2004 & MECH3002 & GENG3000*** | **MECHANICAL ENG. OPTION** |
| Semester 1,  2028 | **GENG5507\*\***  Risk, Reliability and Safety  ***Prereq: 120pts incl. MATH1011 & MATH1012*** | **MECH5551**  Mechanical Eng Design Project 1  ***Prereq: MECH4502 and GENG3000*** | **MECHANICAL ENG. OPTION** | **MECHANICAL ENG. OPTION** |
| Students must pass all credit bearing and 0-pt units to be eligible to graduate | | | | |

**\*\*** Offered in both semesters

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| **Group A Options: Take 6 – 18 pts**  Students must take at least one unit from Group A and may take all three units.  NOTE 1: Students who select GENG4411 must take GENG4412 in the following semester. The two units comprise a 12-point research project.  NOTE 2: Students who do not take GENG4411 and GENG4412 will not be able to graduate with an Honours classification higher than H2B. | **Group B Options: Take up to 12 pts**  NOTE 3: 18 points must be taken from Group A and Group B combined.  Students who take 6 points from Group A must take 12 points from Group B. Students who take 12 points from Group A must take 6 points from Group B. Students who take all units from Group A do not take any units from Group B. |
| **GENG4411** Engineering Research Project Part 1 (S1, S2)  ***Prereq: 144 points incl. 24 points Level 3 units in major & GENG3000*** | **GENG5504** Petroleum Engineering (S2)  ***Prereq: 120 pts incl. GENG2003*** |
| **GENG4412** Engineering Research Project Part 2 (S1, S2)  ***Prereq: GENG4411(taken in semester after GENG4411)*** | **GENG5505** Project Management & Engineering Practice (S1, S2)  ***Prereq: 120pts*** |
| **MECH5552** Mechanical Engineering Design Project 2 (S2)  ***Prereq: MECH5551*** | **CHPR3405** Particle Technology (S1)  ***Prereq: GENG2003*** |
|  | **MECH5504** Design and Failure Analysis of Materials (S2)  ***Prereq: 120 pts incl. MECH2002 and GENG2004*** |
|  | **GENG5514** Finite Element Method (S1)  ***Prereq: 120 pts incl. (GENG2003 or GENG2010) & GENG2004 & GENG3405*** |
|  | **MECH4428** Degradation of Materials (S1)  ***Prereq: 96 pts incl. MECH2002*** |

The Rules for the BH011 Bachelor of Engineering (Honours) can be [**found here**](https://handbooks.uwa.edu.au/coursedetails?code=BH011#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 in the [**Handbook**](https://handbooks.uwa.edu.au/).

All students must complete GENG1000, GENG2000 & GENG3000 Engineering Practice Skills modules (0 points = 3 x 1-week modules). Check Handbook for prerequisites.

All students must complete the Professional Engineering Practicum and GENG5010 Professional Eng. Portfolio (0 points). Details are available on the *LMS Organisation EMS Student Experience.*

**A Note about Bridging**

Up to 12 points of bridging can be accommodated in this course. Bridging units must be successfully completed within the first 48 points of study.

• Students who have not achieved a scaled mark of at least 50 in Mathematics Specialist ATAR or equivalent are required to complete MATH1722.

• Students who have not achieved a scaled mark of at least 50 in Physics ATAR or equivalent are required to complete PHYS1030.

• Students who have not achieved a scaled mark of at least 50 in Chemistry ATAR or equivalent are required to complete CHEM1003.

Students who need to bridge in only one subject will have space to include three broadening units in the course.

*Students who bridge outside of the course and then transfer can only seek advanced standing for up two bridging units. You cannot claim advanced standing for MATH1721 Mathematics Foundations: Methods or equivalent.*

**Further Help**

If you need to discuss your study plan further, please contact the [**EMS Student Office**](https://www.uwa.edu.au/students/my-course/study-areas/ems-students)**.**