|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year 1** | | | | |
| *Students must complete* ***GENG1000 Engineering Practice 1*** *within their first year (0 points = 1 week module)* | | | | |
| Semester 1,  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*** | **GENG1010\*\***  Introduction to Engineering | **CITS2401\*\***  Computer Analysis & Visualisation ***Prereq: Math Methods or MATH1721*** |
| Semester 2,  2024 | **MATH1011\*\***  Multivariable Calculus  ***Prereq: Math Specialist ATAR or MATH1722*** | **MATH1012\*\***  Mathematical Theory & Methods  ***Prereq: Math Specialist ATAR or MATH1722*** | **PHYS1001\*\***  Physics for Scientists & Engineers  ***Prereq: (Physics ATAR or PHYS1030) & (Math Methods ATAR or MATH1721); Coreq: MATH1722*** | **GENG1014**  Earth Systems Engineering |
| **Year 2** | | | | |
| Students must complete **GENG2000 Engineering Practice 2** within their second year (0 points = 1 week module) | | | | |
| Semester 1,  2025 | **CIVL2551**  Civil Engineering Practice  ***APS: MATH1011*** | **ENSC2004\*\***  Engineering Mechanics  ***Prereq: (Phys ATAR or PHYS1030) and Math Specialist ATAR or MATH1722)***  ***Coreq: MATH1011***  ***APS: PHYS1001 and MATH1011*** | **GENG2009**  Principles of Geomechanics  ***Prereq: MATH1011& MATH1012 & PHYS1001*** | Broadening |
| Semester 2,  2025 | **CIVL2008**  Structural Analysis  ***Prereq: ENSC2004 and MATH1011*** | **GENG2010**  Principles of Hydraulics  ***Prereq: MATH1011 & MATH1012*** | **GENG2012**  Data Collection & Analysis  ***Prereq CITS2401 & MATH1012*** | **GENG3405**  Numerical Methods & Modelling  ***Prereq: MATH1012 & CITS2401*** |
| **Year 3** | | | | |
| Students must complete **GENG3000 Engineering Practice** 3 within their third year (0 points = 1 week module) | | | | |
| Semester 1,  2026 | **GENG2004**  Solid Mechanics  ***Prereq: ENSC2004 & MATH1011 & MATH1012*** | **CIVL3401**  Applied Geomechanics  ***Prereq: GENG2009*** | **CIVL3402**  Hydraulics for Civil Engineers  ***Prereq: GENG2010*** | Broadening |
| Semester 2,  2026 | **CIVL3403**  Structural Concrete Design  ***Prereq: GENG1000 & GENG2004*** | **CIVL4430**  Transportation and Pavement Engineering  ***Prereq: 96pts incl. MATH1011 & CITS2401*** | **Civil Engineering**  **Group B Option** | **Civil Engineering**  **Group B Option** |
| **Year 4** | | | | |
| Students must undertake practical work experience during the course to satisfy **GENG5010 Professional Engineering Portfolio** (0 points) – *see notes below*  *Students must achieve a WAM of at least 50 in order to progress to the fourth (Honours) year – see BE(Hons) rules* | | | | |
| Semester 1,  2027 | **GENG4411\*\***  Engineering Research Project Pt 1  ***Prereq: 144 points incl. 24 points Level 3 units in major & GENG3000*** | **#Group A Option CIVL5550**  Civil Infrastructure Design Project  ***Prereq: 120 pts incl. GENG3000 and CIVL4430***  ***APS: GENG2009***  **OR Civil Eng Group B Option** | **CIVL3404**  Structural Steel Design  ***Prereq: GENG2004*** | **Civil Engineering**  **Group B Option** |
| Semester 2,  2027 | **GENG4412\*\***  Engineering Research Project Pt 2  ***Prereq: GENG4411***  ***(taken in semester after GENG4411)*** | **#Group A Option CIVL5552**  Civil Structural Design Project  ***Prereq: 120 pts incl. GENG3000 and CIVL3404***  ***APS: CIVL2008***  **OR Civil Eng Group B Option** | **GENG5507\*\***  Risk, Reliability & Safety  ***Prereq: 120 pts incl. MATH1011 & MATH1012*** | **GENG5505\*\***  Project Management & Engineering Practice  ***Prereq: 120 pts*** |
| *Students must undertake practical work experience to satisfy* ***GENG5010 Professional Engineering Portfolio*** *(0 points)* | | | | |

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

**#Group A Option:** Students take either CIVL5550 or CIVL5552 or both. Students who take only one design project from Group A must select four units from Group B~~.~~

|  |  |
| --- | --- |
| **Group A Options: Take 6 – 12 pts** Students must take at least **one** unit from Group A. | **Group B Options: Take 18 – 24 pts** Students who take **one** unit from Group A must select **four** units from Group B. Student who take **both** units in Group A must select **three** units from Group B. |
| **CIVL5550** Civil Infrastructure Design Project (S1)  ***Prereq: 120 pts incl. GENG3000 and CIVL4430***  ***APS: GENG2009*** | **CIVL5501** Structural Dynamics (S2)  ***Prereq: 120 pts incl. GENG2004*** |
| **CIVL5552** Civil Structural Design Project (S2)  ***Prereq: 120 pts incl. GENG3000 and CIVL3404***  ***APS: CIVL2008*** | **CIVL5503** Underground Construction (S1)  ***Prereq: 120 pts inc. CIVL3401*** |
|  | **CIVL5505** Design of Offshore Energy Facilities (S2)  ***Prereq: 120 pts incl. GENG3000 & CIVL3404*** |
|  | **ENVE3402** Engineering Hydrology (S1)  ***Prereq: GENG1014*** |
|  | **GENG5501** Coastal and Offshore Engineering (S1)  ***Prereq: 120 pts incl. (GENG2003 or GENG2010)*** |
|  | **GENG5502** Environmental Geotechnics(S2)  ***Prereq: 120 pts incl. GENG2009*** |
|  | **GENG5514** Finite Element Method (S1)  ***Prereq: 120 pts incl. (GENG2003 or GENG2010) & GENG2004 & GENG3405*** |

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)**.**