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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\*\***  Math Specialist  ***Prereq: Math Methods ATAR or MATH1721 – see notes*** | ***CHEM1003****\*\* Intro Chemistry*  ***OR***  ***PHYS1030\*\**** *Bridging Physics*  ***Prereq: Maths Methods ATAR or MATH1721 or MATH1722 – see notes*** | **CHPR1005**  Mass and Energy Balances  ***Prereq: (Chem ATAR or CHEM1003) & (Maths Methods ATAR or MATH1721)*** | **GENG1010\*\***  Introduction to Engineering |
| Semester 1,  2025 | **MATH1011\*\***  Multivariable Calculus  ***Prereq: Math Specialist ATAR or MATH1722*** | **MATH1012\*\***  Mathematical Theory & Methods  ***Prereq: Math Specialist ATAR or MATH1722*** | **CHEM1001\*\***  Chemistry—Properties and Energetics  ***Prereq: Chemistry ATAR or CHEM1003*** | **PHYS1001\*\***  Physics for Scientists & Engineers  ***Prereq: (Physics ATAR or PHYS1030) &***  ***(Math Methods ATAR or MATH1721***  ***Coreq: MATH1722*** |
| **Year 2** | | | | |
| Students must complete **GENG2000 Engineering Practice 2** within their second year (0 points = 1 week module) | | | | |
| Semester 2,  2025 | **CHPR2018**  Process Synthesis and Design 1  ***Prereq: CHPR1005*** | **GENG2010**  Principles of Hydraulics  ***Prereq: MATH1011 & MATH1012 – see notes*** | **CHPR2007**  Heat and Mass Transfer  ***Prereq: CHPR1005 & MATH1011*** | **ENSC1004**  Engineering Materials  ***Prereq: (Chem ATAR or CHEM1003) &***  ***(Maths Methods ATAR or MATH1721) &***  ***(Phys ATAR or PHYS1030)*** |
| Semester 1,  2026 | **CITS2401\*\***  Computer Analysis & Visualisation  ***Prereq: Math Methods ATAR or MATH1721*** | **CHEM1002**\*\*  Chemistry – Structure and Reactivity  ***Prereq: Chemistry ATAR or CHEM1003*** | **CHPR3405**  Particle Technology  ***Prereq: GENG2003*** | **CHPR2006**  Chemical Engineering Thermodynamics  ***Prereq: CHEM1001 & CHPR1005 & MATH1011*** |
|  | | | | |
| Students must complete **GENG3000 Engineering Practice** 3 within their third year (0 points = 1 week module) | | | | |
| Semester 2,  2026 | **CHPR3406**  Reaction Engineering  ***Prereq: CHPR2006*** | **CHPR3407**  Transport Phenomena  ***Prereq: GENG2003 & (CHPR2007*** **or MECH3024)** | **CHPR3019**  Unit Operations  ***Prereq: GENG2003 & CHPR2006 & CHPR2007*** | **CHPR3018**  Process Synthesis and Design 2  ***Prereq: GENG2000 & CHPR2018 Coreq: CHPR3019*** |
| Semester 1,  2027 | **Chemical Engineering Option 1** | **CHPR3404**  Advanced Thermodynamics & Transfer Processes  ***Prereq: CHPR2007 & CHPR2006 & MATH1012*** | **CHPR4501**  Advanced Reaction Engineering & Catalysts  ***Prereq: CHPR3406 & CHPR2007*** | **Chemical Engineering Option 2** |
| **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 2,  2027 | **Chemical Engineering Option 3** | **GENG5507\*\***  Risk, Reliability & Safety  ***Prereq: 120pts incl. MATH1011 & MATH1012*** | **GENG4411\*\***  Engineering Research Project Pt 1  ***Prereq: 144 points incl. 24 points Level 3 units in major & GENG3000*** | **GENG3402**  Control Engineering  ***Prereq: MATH1011 & MATH1012*** |
| Semester 1,  2028 | **CHPR5550**  Chemical Engineering Design Project (12 pts)  ***Prereq: CHPR3018 & CHPR3019 & CHPR3406 & GENG3000*** | | **GENG4412\*\***  Engineering Research Project Pt 2  ***Prereq: GENG4411***  ***(taken in semester after GENG4411)*** | **Chemical Engineering Option 4** |
| 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 units to the value of 12 points** | **Group B Options: Take units to the value of 12 points** |
| **CHPR4408** Chemical and Thermal Renewable Energies (S1)  ***Prereq: 96 pts*** | **CITS4009** Computational Data Analysis (S2)  ***Prereq: 96 pts*** |
| **CHPR5520** Combustion Science and Technology (NS)  ***Prereq: 120 pts incl. (CHPR2006 or MECH3024)*** | **ENVE4401** Transport Processes in the Environment (S2)  ***Prereq: 96 pts incl. (GENG2003 or GENG2010)*** |
| **CHPR5521** Gas Processing 1 (S1)  ***Prereq: 120 pts incl. CHPR3404*** | **GENG4403** Extractive Metallurgy (S1)  ***Prereq: 96 pts incl. (ENSC1004 or MINE2001)*** |
| **CHPR5522** Gas Processing 2 (S2)  ***Prereq: 120 pts incl. CHPR3404*** | **GENG4410** Fossil to Future – The Transition (S2)  ***Prereq: 96 pts*** |
| **GENG5506** Process Instrumentation and Control (S1)  ***Prereq: 120 pts incl. GENG3402***  ***APS: ENSC2003*** | **GENG5503** Modern Control Systems (S2)  ***Prereq: 120 pts incl. MATH1011 and MATH1012*** |
| **ENVE5502** Water and Wastewater Engineering (S2)  ***Prereq: 120 pts incl. (GENG2003 or GENG2010)*** | **GENG5504** Petroleum Engineering (S2 NA 2024)  ***Prereq: 120 pts incl. GENG2003*** |
| **GENG5516** Energy Storage Systems (S1)  ***Prereq: 120 pts incl. CHPR2006 or MECH3024*** | **GENG5506** Renewable Energy (S2)  ***Prereq: 120 pts incl. ENSC2003 and MATH1012*** |

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 one broadening unit in this course.

Chem Eng students who need to bridge ATAR subjects may seek special approval via AskUWA to take CHPR1005 Mass & Energy Balances concurrently with CHEM1003 Introductory Chemistry, and to replace GENG2003 Fluid Mechanics (S1) with GENG2010 Principles of Hydraulics (S2).

*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)**.**