**Semester 1 Start**

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| **Academic Calendar Year 1** | | | | | | | |
| Students must complete **GENG1000 Engineering Practice 1** within their first year of enrolment (0 points = 1 week module) | | | | | | | |
| Semester 1,  2025 | **MATH1722: Mathematics Foundations: Specialist\*\***  pre-req: ATAR Math Methods (or MATH1721)  – see note on bridging | **CHEM1003: Intro Chemistry\*\***  **OR**  **PHYS1030: Bridging Physics\*\***  pre-req: ATAR Math Methods (or MATH1721) | | **GENG1010\*\***  Introduction to Engineering | | | **CITS1401: Computational Thinking with Python\*\***  pre-req: ATAR Math Methods (or MATH1721) (see notes) |
| Semester 2,  2025 | **MATH1011: Multivariable Calculus\*\***  pre-req: ATAR Math Specialist (or MATH1722) | **ENSC2004: Engineering Mechanics\*\***  pre-req: ATAR Physics (or PHYS1030) AND  ATAR Math Specialist (or MATH1722) co-req: MATH1011; APS: PHYS1001 & MATH1011 | | **ELEC1303: Digital Systems** | | | **PHYS1001: Physics for Scientists & Engineers\*\***  pre-req: ATAR Physics (or PHYS1030) AND ATAR Math Specialist (or MATH1722);  co-req: MATH1722 |
| **Academic Calendar Year 2** | | | | | | | |
| Students must complete **GENG2000 Engineering Practice 2** within their second year of enrolment (0 points = 1 week module) | | | | | | | |
| Semester 1,  2026 | **MATH1012: Mathematical Theory & Methods\*\***  pre-req: ATAR Math Specialist (or MATH1722) | **ENSC2003: Eng. Electrical Fundamentals\*\***  pre-req: ATAR Physics (or PHYS1030) AND MATH1011; co-req: MATH1012; APS: PHYS1001 | | **ELECTIVE** | | | **PHYS1002: Modern Physics\*\***  pre-req: PHYS1001 |
| Semester 2,  2026 | **ELEC2311: Digital System Design**  pre-req: ELEC1303 | **ELEC3015: Signals and Systems**  pre-req: CITS2401 (or CITS1401) & ENSC2003 & MATH1012 | | **MATH3023: Adv. Math Applications**  pre-req: MATH1011; co-req: MATH1012 (see notes) | | | **PHYS2002: Many Particle Systems**  pre-req: PHYS1001, PHYS1002 & MATH1011 |
| **Academic Calendar Year 3** | | | | | | | |
| Students must complete **GENG3000 Engineering Practice** 3 within their third year of enrolment (0 points = 1 week module) | | | | | | | |
| Semester 1,  2027 | **ELEC3014: Electronic Materials  and Devices**  pre-req: ENSC2003 & MATH1012 & PHYS1001 | **STAT2063: Probabilistic Methods and their Applications**  pre-req: MATH1011 & MATH1012 | | **ELEC3021: Circuits and Electronics**  pre-req: ENSC2003 & MATH1011  APS: PHYS1001 | | | **PHYS2003: Physics for Electrical Engineers**  pre-req: MATH1011 & MATH1012 & PHYS1001 (see notes) |
| Semester 2,  2027 | **ELEC3020: Embedded Systems**  pre-req: (GENG2000) &  (CITS2401 or CITS1001 or CITS1401) | **ELEC3016: Power and Machines**  pre-req: ENSC2003 & MATH1012  APS: PHYS1001 | | **ELECTIVE** | | | **PHYS3011: Mathematical Physics**  pre-req: PHYS2001(or PHYS2003)  & MATH2501 (or MATH3023)  co-req: PHYS2002 |
| **Academic Calendar Year 4** | | | | | | | |
| *Students must achieve a WAM of at least 50 in order to progress to the fourth (Honours) year of enrolment – see BE(Hons) rules* | | | | | | | |
| Semester 1,  2028 | **#ELEC4505: Power System Analysis**  pre-req: ELEC3016 | **#ELEC4404: Signal Processing**  pre-req: CITS2401 & ELEC3015 & STAT2063 | | **#ELEC4408: High Frequency Circuits  and Systems**  pre-req: ELEC3021 & MATH3023 | | | **PHYS3001: Quantum Mechanics** pre-req: PHYS2001(or PHYS2003)  & MATH2501 (or MATH3023) |
| Semester 2,  2028 | **#ELEC4402: Communications Systems**  pre-req: STAT2063 & ELEC3015 & MATH3023 | **GENG3402: Control Engineering**  pre-req: MATH1011 & MATH1012 | | **Level 3 Physics Option Unit**  (e.g. PHYS3006 or PHYS3012, OR swap semester to do PHYS3003 or PHYS3005) | | | **PHYS3002: Electrodynamics  and Relativity**  pre-req: PHYS2001 (or PHYS2003), PHYS2002  & MATH2501(or MATH3023) |
| **Academic Calendar Year 5** | | | | | | | |
| Students must undertake practical work experience during the course to satisfy **GENG5010 Professional Engineering Portfolio** (0 points) – *see notes below* | | | | | | | |
| Semester 1,  2029 | **#GENG4411: Engineering Research Project Pt 1\*\***  pre-req: 144 points incl. 24 points Level 3 units in major & GENG3000 | | **#ELEC5506: Process Instrumentation  and Control**  pre-req: 120 pts incl. GENG3402  APS: ENSC2003 | | **#ELEC4407: Engineering Electromagnetics**  pre-req: ELEC3021& MATH3023 & PHYS2003 | **ELECTIVE** | |
| Semester 2,  2029 | **#GENG4412: Engineering Research Project Pt 2\*\***  pre-req: GENG4411  (taken in semester after GENG4411) | | **#ELEC5552: Electrical & Electronic Engineering Design Project**  pre-req: 120pts incl. GENG3000 | | **#GENG5505: Project Management & Engineering Practice\*\***  pre-req: 120pts | **ELECTIVE** | |
| Students must pass all credit bearing and 0-pt units to be eligible to graduate | | | | | | | |

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

Physics Units

Elec Eng x Physics Overlapping Units (see notes)

Elective Units

#All Level 4/5 engineering units also have a WAM pre-requisite. See notes.

**Semester 2 Start**

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| **Academic Calendar Year 1** | | | | | |
| Students must complete **GENG1000 Engineering Practice 1** within their first year of enrolment[[1]](#footnote-1) (0 points = 1 week module) | | | | | |
| Semester 1, 2025 |  |  | |  |  |
| Semester 2,  2025 | **MATH1722: Mathematics Foundations: Specialist\*\***  pre-req: ATAR Math Methods (or MATH1721)  – see note on bridging | **CHEM1003: Intro Chemistry\*\***  **OR**  **PHYS1030: Bridging Physics\*\***  pre-req: ATAR Math Methods (or MATH1721) | | **ELEC1303: Digital Systems** | **CITS1401: Computational Thinking  with Python**  pre-req: ATAR Math Methods (or MATH1721)  (see notes) |
| **Academic Calendar Year 2** | | | | | |
| Students must complete **GENG2000 Engineering Practice 2** within their second year of enrolment (0 points = 1 week module) | | | | | |
| Semester 1,  2026 | **MATH1011: Multivariable Calculus\*\***  pre-req: ATAR Math Specialist (or MATH1722) | **ELECTIVE** | | **GENG1010\*\***  Introduction to Engineering | **PHYS1001: Physics for Scientists & Engineers\*\***  pre-req: ATAR Physics (or PHYS1030) AND ATAR Math Specialist (or MATH1722)  co-req: MATH1722 |
| Semester 2,  2026 | **MATH1012: Mathematical Theory & Methods\*\***  pre-req: ATAR Math Specialist (or MATH1722) | **ENSC2004: Engineering Mechanics\*\***  pre-req: ATAR Physics (or PHYS1030) AND  ATAR Math Specialist (or MATH1722);  co-req: MATH1011; APS: PHYS1001 & MATH1011 | | **ELEC2311: Digital System Design**  pre-req: ELEC1303 | **PHYS1002: Modern Physics\*\***  pre-req: PHYS1001 |
| **Academic Calendar Year 3** | | | | | |
| Students must complete **GENG2000 Engineering Practice 3** within their third year of enrolment (0 points = 1 week module) | | | | | |
| Semester 1,  2027 | **STAT2063: Probabilistic Methods and their Applications**  pre-req: MATH1011 & MATH1012 | **ENSC2003: Eng. Electrical Fundamentals\*\*** pre-req: ATAR Physics (or PHYS1030) AND MATH1011; co-req: MATH1012, APS: PHYS1001 | **MATH2501: Adv. Mathematics Methods**  pre-req: MATH1011; co-req: MATH1012 (see notes) | | **PHYS2003: Physics for Electrical Engineers**  pre-req: MATH1011 & MATH1012 & PHYS1001 (see notes) |
| Semester 2,  2027 | **ELEC3020: Embedded Systems**  pre-req: (GENG2000) &  (CITS2401 or CITS1001 or CITS1401) | **ELEC3015: Signals and Systems**  pre-req: CITS2401 (or CITS1401) & ENSC2003 & MATH1012 | **GENG3402: Control Engineering**  pre-req: MATH1011 & MATH1012 | | **PHYS2002: Many Particle Systems**  pre-req: PHYS1001, PHYS1002 & MATH1011 |
| **Academic Calendar Year 4** | | | | | |
| *Students must achieve a WAM of at least 50 in order to progress to their fourth (Honours) year of enrolment – see BE(Hons) rules* | | | | | |
| Semester 1,  2028 | **ELEC3014: Electronic Materials  and Devices**  pre-req: ENSC2003 & MATH1012 & PHYS1001 | **#ELEC4404: Signal Processing**  pre-req: CITS2401 & ELEC3015 & STAT2063 | **ELEC3021: Circuits and Electronics**  pre-req: ENSC2003 & MATH1011  APS: PHYS1001 | | **PHYS3001: Quantum Mechanics** pre-req: PHYS2001(or PHYS2003)  & MATH2501 (or MATH3023) |
| Semester 2,  2028 | **ELEC3016: Power and Machines**  pre-req: ENSC2003 & MATH1012  APS: PHYS1001 | **#ELEC4402: Communications Systems**  pre-req: STAT2063 & ELEC3015 & MATH3023  (or MATH2501) | **ELECTIVE** | | **PHYS3011: Mathematical Physics**  pre-req: PHYS2001(or PHYS2003)  & MATH2501 (or MATH3023)  co-req: PHYS2002 |
| **Academic Calendar Year 5** | | | | | |
| Students must undertake practical work experience during the course to satisfy **GENG5010 Professional Engineering Portfolio** (0 points) – *see notes below* | | | | | |
| Semester 1,  2029 | **#ELEC4505: Power System Analysis**  pre-req: ELEC3016 | **#ELEC4407: Engineering Electromagnetics**  pre-req: ELEC3021& MATH3023 & PHYS2003 | **#ELEC4408: High Frequency Circuits  and Systems**  pre-req: ELEC3021 & MATH3023 | | **Level 3 Physics Option Unit**  (e.g. PHYS3003 or PHYS3005) |
| Semester 2,  2029 | **#GENG4411: Engineering Research Project Pt 1\*\***  pre-req: 144 points incl. 24 points Level 3 units in major & GENG3000 | **#ELEC5552: Electrical & Electronic Engineering Design Project**  pre-req: 120pts incl. GENG3000 | **ELECTIVE** | | **PHYS3002: Electrodynamics  and Relativity**  pre-req: PHYS2001 (or PHYS2003), PHYS2002  & MATH2501(or MATH3023) |
| **Academic Calendar Year 6** | | | | | |
| Semester 1,  2030 | **#GENG4412: Engineering Research Project Pt 2\*\***  pre-req: GENG4411  (taken in semester after GENG4411) | **#ELEC5506: Process Instrumentation  and Control**  pre-req: 120 pts incl. GENG3402  APS: ENSC2003 | **#GENG5505: Project Management & Engineering Practice\*\***  pre-req: 120pts | | **ELECTIVE** |
| Students must pass all credit bearing and 0-pt units to be eligible to graduate  Physics Units  Elec Eng x Physics Overlapping Units (see notes)  Elective Units | | | | | |

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

#All Level 4/5 engineering units also have a WAM pre-requisite. See notes.

**General Notes**

* The Rules for the CB004 Bachelor of Engineering (Honours) can be [**found here**](https://handbooks.uwa.edu.au/rules?code=CB004)
* 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](https://handbooks.uwa.edu.au/unitdetails?code=GENG1000), [GENG2000](https://handbooks.uwa.edu.au/unitdetails?code=GENG2000) & [GENG3000](https://handbooks.uwa.edu.au/unitdetails?code=GENG3000) Engineering Practice Skills modules (0 points = 3 x 1-week modules) within the specified year of enrolment. These units are offered during non-standard teaching periods. Please consult the handbook for further information on unit availabilities.
* 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.*
* Students must maintain a WAM of at least 50 in the BE(Hons). This is required to enrol in Level 4/5 BE(Hons) units

**Bridging units:**Up to 12 points of bridging is permitted. 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.

**Overlapping Units:**There are 6 overlapping units between the Electrical and Electronic Engineering major and the Physics major, some of which are incompatible with each other and listed below.

* Students should take CITS1401 instead of CITS2401
* Students should take PHYS2003instead of PHYS2001
* Students can take either MATH2501 (Semester 1) OR MATH3023 (Semester 2)

**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)**.**

1. Each year of enrolment is defined as completing 48 credit points (typically 8 units or two semesters of full-time study). For Semester 2 starters, this may extend into the next calendar year. [↑](#footnote-ref-1)