BE (Hons) Mechatronics Engineering (AK3751)

Study Plan 2025

This (old structure) Study Plan applies only to students who began the BE Hons programme prior to 2024.
Please refer to the new (refreshed) Study Plan if you are a student who started 2024 onwards.

Notes:

- Once you have made your selections, go to MyAUT to complete your enrolment.
- S1 = Semester 1, S2 = Semester 2, SS = Summer School
- Pre-requisite papers are shown in brackets after each paper. **Please ensure you have completed all necessary pre-requisite courses before you enrol for a course.**
- For enrolment queries or issues, please email your Academic Administrator (e: *engineer@aut.ac.nz*).
- **Course level** is the first digit of the numeric part of the alphanumerical code (E.g., ENGE500 is a level 5 course).

YEAR 1 (for students who commenced BE Hons studies prior to 2024)		
ENGE500	Introduction to Sustainable Engineering Design	S1
ENGE501	Engineering Mathematics I	S1
ENME502	Engineering Materials I	S2
ENSE504	Introduction to Computing	*Discontinued* Enrol in **COMP500 Programming Concepts and Techniques** (S1, S2, SS) instead if repeat is required
ENEL515	Electrical Principles A	*Discontinued* ▪ If failed ENEL515 or ENEL516, take **ENGE504 Electrical Engineering Fundamentals** (S1 or S2) ▪ If failed both ENEL515 and ENEL516, take ENGE504 (S1) and **ENEL500 Analogue Devices and Systems** (S2)
ENEL516	Electrical Principles B	
ENME510	Mechanical Principles A	*Discontinued* ▪ If failed ENME510 or ENME511, take **ENGE503 Engineering Mechanics** (S1) ▪ If failed both ENME510 and ENME511, take ENGE503 (S1) and **ENME500 Introduction to Thermofluids and Energy** (S2)
ENME511	Mechanical Principles B	

YEAR 2		
ENEL600	Electronics	*Discontinued* Enrol in **ENEL606 Analogue and Digital Systems** (S2) if repeat is required (ENGE504)
ENEL608	Introduction to Microcontrollers (ENSE504 or COMP500)	S1
ENME609	Solid Mechanics I (ENME510 or ENGE503, ENME502, ENGE501)	S1
ENGE601	Engineering Mathematics II (ENGE501)	S1
ENEL602	Electronics Project (ENEL515 and ENEL516 or ENGE504, ENEL608)	S1, S2
ENGE600	Engineering Management I	S2
ENGE702	Engineering Mathematics III (ENGE601)	S2
ENME711	Fluids and Thermodynamics	*Discontinued* Enrol in **ENME601 Thermodynamics** (S2) if repeat is required (ENGE503)

YEAR 3 (students must have completed all Year 1 papers)					
Minor 1	Minor Elective 1	S1	Minor 2	Minor Elective 2	S2
COMP822	Human Computer Interaction	S1	ENGE701	Engineering Management II (ENGE600)	S2
ENEL712	Embedded System Design (ENEL608, ENEL600 or ENEL606)	S1	ENEL702	Instrumentation and Control Systems (ENEL600 or ENEL606, ENGE702)	S2
ENSE602	Object Oriented Programming for Engineers (ENSE504 or COMP500)	S1	ENSE600	Software Construction (ENSE602)	S2

YEAR 4 (students must have completed all Year 1 and Year 2 papers)					
ENME891	Industrial Project Part A	S1 or S2	ENME892	Industrial Project Part B	S1 or S2
Minor 3	Minor Elective 3	S1	Minor 4	Minor Elective 4	S2
ENME802	Computer Aided Engineering and Analysis (ENME609, ENME711)	S1	ENME800	Industrial Robotics: Mechanics and Planning (ENGE702, ENEL702)	S2
ENEL809	Digital Control (ENEL702)	S1	ENSE810	Embedded Software Engineering (ENEL712)	S2

Plus: completion of **ENGE888 Engineering Work Experience** (enrol in either S1 or S2)

- No fees or credits are attached to this course
- Must be completed in order to graduate
- Send the **approval form** to the Work Experience Coordinator (daniel.konings@aut.ac.nz) for your work to be considered/approved prior to commencement of work
- Complete 800 hours of work
- Submit a 4500 - 5000 word report through Canvas (email engineer@aut.ac.nz when you are ready to submit the report so you can be enrolled or if you have any questions)

Minor options

Please select one minor pathway from the list below. Please be aware that the combination of minor courses must be from the same minor pathway. You will not be able to enrol yourself online, please email engineer@aut.ac.nz to request enrolment in your minor paper(s).

Minor must include 60 points from the courses listed below including COMP504, 30 points at Level 6, and 15 points at Level 7.

Computer Science Minor

S1: COMP613 (COMP500), COMP717 (60pts at Level 6), COMP701 (ENSE504 or COMP500)

S2: COMP604 (ENSE504 or COMP500), COMP611 (COMP610), COMP612 (ENGE501)

S1 + S2: COMP504, COMP610 (ENSE602), COMP715

Networks and Cybersecurity Minor

S1: COMP609 (ENSE504 + COMP504), ENEL611 (COMP504), COMP716 (COMP611 or ENGE501 + COMP610), COMP718

S2: COMP604 (ENSE504 or COMP500), COMP607, COMP714, COMP729

S1 + S2: COMP504, COMP715