

BE (Hons) Electrical and Electronic 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 enroll 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 alphanumeric 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	<i>Discontinued</i> Enrol in COMP500 Programming Concepts and Techniques (S1, S2, SS) instead if repeat is required
ENEL515	Electrical Principles A	<i>Discontinued</i> ▪ 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	<i>Discontinued</i> ▪ 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 (ENEL515 & ENEL516 or ENGE504)	<i>Discontinued</i> ▪ If failed ENEL600, take ENEL606 Analog and Digital Systems (S2)
ENEL608	Introduction to Microcontrollers (ENSE504 or COMP500)	S1
ENEL704	Circuit Theory [(ENEL515 or ENGE504) & ENGE501] & co-requisite: ENGE601	<i>Discontinued</i> ▪ If failed ENEL704, take ENEL619 Signals, Circuits and Systems (S1) ▪ If failed both ENEL601 and ENEL704, take ENEL619 Signals, Circuits and Systems (S1) and ENEL606 Analog and Digital Systems (S2)
ENGE601	Engineering Mathematics II	S1
ENEL601	Signals and Systems [(ENEL515 & ENEL516 or ENGE504) + ENGE501]	<i>Discontinued</i> ▪ If failed ENEL601, take ENEL619 Signals, Circuits and Systems (S1) ▪ If failed both ENEL601 and ENEL704, take ENEL619 Signals, Circuits and Systems (S1) and ENEL606 Analog and Digital Systems (S2)
ENEL602	Project [(ENEL515 & ENEL516 or ENGE504) + ENEL600, ENEL608]	S2
ENGE600	Engineering Management I	S2
ENGE702	Engineering Mathematics III (ENGE601)	S2

YEAR 3 Students must have completed all Year 1 papers

ENEL712	Embedded System Design (ENEL608, ENEL600)	S1	ENEL703	Power Systems Engineering (ENEL515&ENEL516 OR ENGE504)	S2
ENEL701	Power Electronic Systems (ENEL600)	S1	ENEL705	Fields and Waves (ENGE601)	S2
ENEL702	Instrumentation and Control Systems (ENEL601)	S1	ENEL709	Design Project (ENEL602)	S2
ENGE800	Engineering Numerical Techniques and Statistical Analysis (ENGE702)	S1	ENEL700	Communication Engineering (ENEL600, ENEL601)	S2

YEAR 4 Students must have completed all Year 1 and Year 2 papers

ENEL891	Industrial Project (Electrical) Part A (ENEL709)	S1 or S2	ENEL892	Industrial Project (Software) Part B	S1 or S2
General Elective (GE)*	Any level 5 paper or above within the university	S1 or S2	ENGE701	Engineering Management II (ENGE600)	S2
Level 8 Elective	Choose from Level 8 Electives listed below	S1	Level 8 Elective	Choose from Level 8 Electives listed below	S2
Level 8 Elective	Choose from Level 8 Electives listed below	S1	Level 8 Elective	Choose from Level 8 Electives listed below	S2

Level 8 Electives

Select two electives per semester (please ensure you have done the pre-requisites indicated in brackets prior to selecting the papers below):

ENEL800	Wireless Systems (ENEL700)	S1	ENEL810	Advanced Control (ENEL809)	S2
ENEL804	Sustainable Energy Systems	S1	ENEL813	Power Systems Quality Management (ENEL701)	S2
ENEL809	Digital Control (ENEL702)	S1	ENSE810	Embedded Software Engineering (ENEL712)	S2
ENSE807	Digital Signal Processing (ENEL712 or ENSE601)	S1			

*General Elective (any level 5 paper or above within the university). Students can choose a General Elective from this link and get approval from the respective school the course belongs to, before informing us to enrol - <https://www.aut.ac.nz/study/study-options/Additional-majors-and-minors-for-bachelors-degrees>

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 (hamid.gholamhosseini@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)