

# BE (Hons) Mechanical Engineering (AK3751)

## Study Plan 2025 for students who commenced studies before 2024

### Notes:

- Once you have made your selections, go to My AUT to complete your enrolment.
- S1 = Semester 1, S2 = Semester 2
- Prerequisite courses are shown in brackets after each course. **Please ensure you have completed all necessary prerequisite courses before you enrol in a course.**
- For enrolment queries or issues, please email your Academic Administrator (e: [engineer@aut.ac.nz](mailto: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		
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 <b>COMP500 Programming Concepts and Techniques</b> (S1, S2, SS) instead if repeat is required
ENEL515	Electrical Principles A	<i>Discontinued</i> <ul style="list-style-type: none"> <li>▪ If failed ENEL515 or ENEL516, take <b>ENGE504 Electrical Engineering Fundamentals</b> (S1 or S2)</li> <li>▪ If failed both ENEL515 and ENEL516, take ENGE504 (S1) and <b>ENEL500 Analogue Devices and Systems</b> (S2)</li> </ul>
ENEL516	Electrical Principles B	
ENME510	Mechanical Principles A	<i>Discontinued</i> <ul style="list-style-type: none"> <li>▪ If failed ENME510 or ENME511, take <b>ENGE503 Engineering Mechanics</b> (S1)</li> <li>▪ If failed both ENME510 and ENME511, take ENGE503 (S1) and <b>ENME500 Introduction to Thermofluids and Energy</b> (S2)</li> </ul>
ENME511	Mechanical Principles B	

YEAR 2		
ENGE601	Engineering Mathematics II (ENGE501)	S1
ENME607	Manufacturing Technology (ENME502)	S1
ENME608	Mechanisms and Dynamics of Machinery (ENME511)	S1
ENME609	Solid Mechanics I (ENGE501, ENME502, ENME510)	S1
ENGE600	Engineering Management I	S2
ENGE702	Engineering Mathematics III (ENGE601)	S2
ENME602	Engineering Design Methodology (ENGE500, ENME510, ENME511)	S2
ENME711	Fluids and Thermodynamics (ENME510 & ENME511)	<i>Discontinued</i> <ul style="list-style-type: none"> <li>▪ If failed ENME711, please get in touch with us to review your study plan at <a href="mailto:engineer@aut.ac.nz">engineer@aut.ac.nz</a></li> </ul>

**YEAR 3 Students must have completed all Year 1 courses**

ENME701	System Dynamics and Vibrations (ENME608)	S1	ENME700	Engineering Materials II (ENME502, ENME607, ENME609)	S2
ENME704	Solid Mechanics II (ENME609, ENGE601)	S1	ENGE701	Engineering Management II (ENGE600)	S2
ENME713	Thermodynamics and Heat Transfer (ENME510, ENME511, ENME711)	S1	ENME702	Mechanical Design (ENME602, ENME608, ENME609)	S2
ENGE800	Engineering Numerical Techniques and Statistical Analysis (ENGE702)	S1	ENME703	Mechatronics and Control (ENEL515, ENEL516, ENME701)	S2

**YEAR 4 Students must have completed all Year 1 and Year 2 courses**

ENME891	Industrial Project (Mechanical) Part A	S1 or S2	ENME892	Industrial Project (Mechanical) Part B	S1 or S2
ENME802	Computer Aided Engineering and Analysis (ENME609, ENME711)	S1	General Elective (GE)*	Any level 5 course or above within the university	S2
ENME804	Advanced Mechanical Design (ENME701, ENME702, ENME704, co-req ENME802)	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**

*Plus three of the following courses:*

ENME806	Biomedical Thermofluids Modelling (ENGE800, ENME711, ENME713)	S1	ENGE803	Innovation Management	S2
ENGE808	Advanced Measuring Systems (requires a variation of study)	S1	ENME800	Industrial Robotics: Mechanics and Planning (ENME608)	S2
ENGE810**	Specialist Readings B		ENME803	Fracture Mechanics and Failure Analysis (ENGE601, ENME609, ENME700)	S2
ENGE812**	Specialist Readings D		ENGE807	Selected Topics in System Modelling (requires a variation of study)	S2
ENME805**	Advanced Fluids and Heat Transfer (ENGE702, ENME711, ENME713)		ENME808**	Advanced Operations Management (ENME700)	
ENME807**	Advanced Manufacturing Technology (ENGE702, ENME700)		ENME809**	Internal Combustion Engines (ENME711, ENME713)	

\*General Elective (any level 5 course 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>

\*\* Courses not offered in 2025

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 ([tet.chuan.lee@aut.ac.nz](mailto:tet.chuan.lee@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](mailto:engineer@aut.ac.nz) when you are ready to submit the report so you can be enrolled or if you have any questions)