

UNSW Engineering Education Specification

1. Program Overview

Program Title: Bachelor of Engineering (Honours)

Award Title: Bachelor of Engineering (Honours) (Mechanical and Manufacturing Engineering)

Engineering Discipline: Mechanical and Manufacturing Engineering

The **MANFBH Mechanical and Manufacturing Engineering** specialisation within the 3707 Bachelor of Engineering (Honours) program is a four-year, full-time degree delivered by the School of Mechanical and Manufacturing Engineering. The program is aligned with AQF level 8 and equips graduates with advanced knowledge and skills in Mechanical and Manufacturing Engineering, with a unique focus on advanced manufacturing technologies.

This report demonstrates how the MANFBH Mechanical and Manufacturing Engineering specialisation of the 3707 Bachelor of Engineering (Honours) program at UNSW develops the Engineers Australia Level 1 Graduate Competencies in its students.

The Mechanical & Manufacturing Engineering program meets the Engineers Australia Stage 1 Competency Standard by developing graduates with comprehensive technical knowledge, strong engineering application capabilities, and well-developed professional attributes. The curriculum integrates engineering fundamentals with specialist applications in manufacturing technologies, operations management, process technology, and automation, ensuring students develop the depth and breadth of expertise required by the Stage 1 Standard.

In addition, through design projects, laboratory experiences, team-based learning, and industry engagement, students develop competencies in advanced problem-solving, sustainable engineering and manufacturing practices, and project management. These skills prepare graduates to contribute effectively to the manufacturing engineering profession and address complex challenges facing industry and society.

The report starts by outlining the overall aims of the specialisation and highlighting its distinct features. It then presents the specialisation plan, followed by a description of the Specialisation Learning Outcomes (SLOs). The process used for developing and to obtain feedback for their continuous improvement is also detailed. The report then presents the curriculum mapping that demonstrates the alignment between individual courses and the SLOs, the SLOs to the Graduate Capabilities, and the relationship between individual courses and the Graduate Capabilities.

2. Career Alignment

The Mechanical and Manufacturing specialisation has been specifically designed to combine a degree in Mechanical Engineering, which is for the most part technical in nature, with substantial further development of critical thinking, multi-criteria analysis and decision making, modelling and characterisation of complex systems, and engineering management. This makes our graduates particularly desirable in a very wide variety of employment sectors. In addition, our engineers are equipped to take on management roles early in their career.

The specialisation prepares graduates for clearly defined professional roles across the breadth of Mechanical and Manufacturing Engineering by aligning its learning outcomes and industry engagement with contemporary engineering practice. It provides a pathway to a Professional Engineer through Engineers Australia, with curriculum design informed by industry standards.

The specialisation equips graduates for both technical and leadership roles in:

- Consulting firms
- Sales support
- Supply chain management
- Strategic decision making

It develops strong analytical, design and project-delivery capabilities through design-based learning, laboratory practice and industry-linked projects.

Professional preparation is embedded through the minimum 60 days of Industrial Training, which connects students with workplace expectations and engineering culture. Research literacy and innovation capability are strengthened through the final-year thesis.

Industry integration is sustained through guest seminars, employer engagement initiatives, thesis showcases, and regular participation in careers events. Students gain hands-on experience with the tools shaping modern engineering practice, ensuring they graduate work-ready for an evolving landscape.

3. Specialisation Framework

The Specialisation Learning Outcomes (SLOs) were initially developed by the School Education Committee, specifically by the Specialisation Leads for each of our accredited BE and ME specialisations. The draft SLOs were formulated considering the following: benchmarking conducted for the 2026 accreditation report; feedback from industry partners; and expectations of graduate outcomes aligned with EA Stage 1 competencies.

The draft SLOs were subsequently reviewed and refined by the Deputy/Associate Head of School (Education) before being presented to the School Education Committee for endorsement. They were then presented to the School's Industry Advisory Board (IAB) for review and consultation in writing, with a follow-up workshop. The SLOs are periodically reviewed by the IAB as part of the School's continuous improvement process, with the next review scheduled in 2026.

The SLOs are aligned with the expectations of Engineers Australia for a graduate engineer, while being articulated within the specific context of Mechanical & Manufacturing Engineering. Reference is made to both Manufacturing specific knowledge and skills.

On successful completion of the MANFBH3707 program, graduates will be able to:

SL01	Demonstrate proficiency of knowledge in the enabling sciences (mathematics, computer science and physics) that form the foundation of mechanical and manufacturing engineering.
SL02	Demonstrate expertise and technical knowledge in mechanical and manufacturing engineering disciplines including: mechanics, thermodynamics, fluid mechanics, mechanics of solids, advanced materials, product design, management, process technology and automation, simulation, process modelling and control.
SL03	Recognise and comply with the national and international standards and regulatory environment which practising Mechanical and Manufacturing Engineers operate within.
SL04	Use critical thinking, best practice analytical techniques and detailed data to make engineering and financial management decisions, supported by detailed data and analysis.
SL05	Apply product-system development and decision-making methods for product lifecycle management.
SL06	Specify, design, integrate and improve systems for manufacturing and process automation (including measurement and feedback control), incorporating advanced digital, AI and IOT technologies.
SL07	Lead and manage mechanical and manufacturing engineering projects, individually or as part of a team, in a systematic and professional manner.
SL08	Link the impact of design, plan, and control decisions in different disciplines and apply distinct professional judgement that contributes to the ethical and sustainable practice of mechanical and manufacturing engineering.
SL09	Communicate professionally and effectively within and outside of mechanical and manufacturing engineering.

4. Continuous Improvement

The Head of School, the Deputy Head of school (Education), Associate Head of School (Education), and School Education Committee (SEC) have the overall responsibility for the management of the undergraduate and postgraduate coursework programs within the School. The committee meets regularly to discuss coordination of teaching, program review, designing new courses and revision of existing courses, course organisation and administration, students' feedback on courses, etc.

Proposals for new courses or course revisions relating to a particular discipline are born out of discussion among all staff in that discipline, as well as relevant industry representatives. New proposals for both undergraduate and postgraduate elective courses are typically driven by discipline-specific academic staff and motivated by current industry or research trends. Course changes are first discussed at the SEC and then at the School level during School Management Committee meetings.

To ensure program design is informed by ongoing evaluation of practice, industry needs, and future demand, the School draws on regular input from the Industry Advisory Board and engagement with Industry Partners. The School has active partnerships with industry organisations that provide regular input on current practice and workforce needs, including through engagement with academic staff and guest lectures. In addition, as Australia's top-ranked Mechanical school, many courses are taught by academics who lead internationally recognised research programs. This leadership, together with strong industry links, keeps teaching research-informed and up to date.

5. Review Process

5.1. Faculty-led Review

UNSW's Academic Offering Review and Monitoring Procedure outlines a structured approach to maintaining the quality and relevance of academic programs and courses. It includes both program-level and course-level review processes, with defined responsibilities and timelines.

Program Monitoring is conducted annually for all programs and specialisations. A comprehensive program review must occur at least once every five years for accredited programs, and every seven years for others. These reviews include a self-evaluation report (SER), review panel, review event, and a formal response with an implementation plan. Oversight is provided by the Academic Board and University Academic Quality Committee (UAQC), with input from Faculty Education Committees and Deans.

Course Review within UNSW Engineering is managed through a two-tiered process: Routine Course Review and Comprehensive Course Review. Routine reviews are conducted at the end of each term by Schools, using data such as enrolment, assessment outcomes, academic integrity issues, WAM differences, and student feedback (myExperience). Courses flagged through this process are added to the Comprehensive Course Review roster.

Comprehensive Course Reviews are detailed evaluations led by the Course Convenor in collaboration with a Faculty Educational Developer, Nexus Fellow, or Senior Academic. These reviews assess course design, pedagogy, alignment with learning outcomes, and feedback mechanisms. Outcomes are documented in a Course Development Plan and an Evaluation Report following the next course delivery. Schools must review at least 10% of their courses annually.

Stakeholder involvement spans multiple levels, including the Academic Board, UAQC, Faculty and School committees, Course Convenors, and external contributors such as students and professional bodies.

Frequency of updates includes termly course reviews, annual program monitoring, and five-yearly comprehensive reviews for accredited programs.

6. Curriculum Mapping

A curriculum mapping has been carried out for the MANFBH Mechanical and Manufacturing Engineering specialisation of the 3707 Bachelor of Engineering (Honours) program at UNSW. The specialisation covers all the Engineers Australia Stage 1 Graduate Competencies.

SLO 1/SLO2 coverage is concentrated primarily in Level 1 and Level 2 courses, where students develop mastery in enabling sciences. First-year courses establish foundational knowledge in mathematics, physics, and programming. Second-year courses further develop this foundation by introducing solid mechanics, fluid mechanics, and thermodynamics.

SLO 2 demonstrates progression from introduction in Level 2 courses to proficiency in Level 3 and Level 4 courses. Core courses cement specialist technical knowledge.

SLO 3 is embedded in core Mechanical Engineering courses that form the basis of this specialisation and further developed in courses where regulatory issues are covered including RCM II, and MSG 3 (Maintenance Steering Group – aviation industry) and FMECA principles. In addition, SLO 3 is also relevant in the design and implementation of finite state machines and PLC-based control systems. SLO 3 forms part of quality control. The combination of the specialisation-specific courses in Mechanical

and Manufacturing Engineering result in a wholistic approach to design, plan, implement and control in a systematic, ethical and sustainable way.

SLO 4 (analytical decision making) is developed throughout the entire Mechanical and Manufacturing specialisation. Critical thinking and best-practice analytical techniques and decision-making is a central focus in third and fourth year. These courses require students to use detailed data and best-practice analytical techniques to make engineering and financial management decisions.

SLO 5 (product lifecycle management) is an integral part of the Mechanical and Manufacturing specialisation. Students begin applying lifecycle concepts early on, advancing to proficient application in later years.

SLO 6 (manufacturing systems and automation) is a distinct focus of the specialisation's upper-level courses. Proficient application is achieved through Year 3, which introduces automation and control, followed by Year 4, where students integrate digital, AI, and IoT technologies into manufacturing systems. The Mechanical and Manufacturing specialisation integrates Mechanical Engineering and Design with the design, modelling, implementation, maintenance and control of manufacturing and complex systems and this directly supports the requirements of SLO8 (ethical and sustainable practice).

SLO 7 (project management) is embedded in all courses in the Mechanical and Manufacturing specialisation. These capabilities are explicitly developed in the design stream and the capstone thesis courses where students manage individual projects and communicate outcomes professionally.

SLO8 (ethical and sustainable practice) is integrated into Mechanical Engineering and Design with the design, modelling, implementation, maintenance and control of manufacturing and complex systems and this directly supports the aim of ethical and sustainable practice. Students are made critically aware of the importance of credible and verifiable data, and the validity and integrity of analysis and decision-making techniques in all Mechanical and Manufacturing specialisation courses.

Similarly, SLO 9 (communication) is developed early on where students are assessed in a VIVA mode and this continues in later years. Written communication skills are developed in each of the Mechanical and Manufacturing courses in years 3 and 4, culminating with an engineering management strategy report in year 4.

The mapping ensures alignment among CLOs, SLOs, and PLOs within the specialisation. CLOs are created by course coordinators to support relevant SLOs while addressing the specific technical knowledge, skills, and practices expected of students. Each assessment task is clearly mapped to CLOs to ensure direct measurement of student achievement.



Table 1. Mapping of the specialisation learning outcomes to the Engineers Australia Stage 1 Competencies

SLO/PLO	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12	PLO13	PLO14	PLO15	PLO16
1. Demonstrate proficiency of knowledge in the enabling sciences (mathematics, computer science and physics) that form the foundation of mechanical and manufacturing engineering.	x	x					x									
2. Demonstrate expertise and technical knowledge in mechanical and manufacturing engineering disciplines such as: mechanics, thermodynamics, fluid mechanics, mechanics of solids, advanced materials, product design, management, process technology and automation.			x	x	x		x	x	x							
3. Recognise and comply with the national and international standards and regulatory environment which practising Mechanical and Manufacturing Engineers operate within.					x	x				x	x			x		
4. Use critical thinking, best practice analytical techniques and detailed data to make engineering and financial management decisions, supported by detailed data and analysis.						x	x	x	x							
5. Apply product-system development and decision-making methods for product lifecycle management.			x		x	x	x	x	x							
6. Specify, design, integrate and improve systems for manufacturing and process automation (including measurement and feedback control), incorporating advanced digital, AI and IOT technologies.			x		x		x	x	x							
7. Lead and manage mechanical and manufacturing engineering projects, individually or as part of a team, in a systematic and professional manner.						x			x	x	x	x	x	x	x	x
8. Link the impact of design, plan, and control decisions in different disciplines and apply distinct professional judgement that contributes to the ethical and sustainable practice of mechanical and manufacturing engineering.						x				x	x	x	x	x	x	x
9. Communicate professionally and effectively within and outside of mechanical and manufacturing engineering.											x	x				

Table 2. Mapping of courses to the specialisation learning outcomes

Course/SLO	1. Demonstrate proficiency of knowledge in the enabling sciences (mathematics, computer science and physics) that form the foundation of mechanical and manufacturing engineering.	2. Demonstrate expertise and technical knowledge in mechanical and manufacturing engineering disciplines such as: mechanics, thermodynamics, fluid mechanics, mechanics of solids, advanced materials, product design, management, process technology and autom	3. Recognise and comply with the national and international standards and regulatory environment which practising Mechanical and Manufacturing Engineers operate within.	4. Use critical thinking, best practice analytical techniques and detailed data to make engineering and financial management decisions, supported by detailed data and analysis.	5. Apply product-system development and decision-making methods for product lifecycle management.	6. Specify, design, integrate and improve systems for manufacturing and process automation (including measurement and feedback control), incorporating advanced digital, AI and IOT technologies.	7. Lead and manage mechanical and manufacturing engineering projects, individually or as part of a team, in a systematic and professional manner.	8. Link the impact of design, plan, and control decisions in different disciplines and apply distinct professional judgement that contributes to the ethical and sustainable practice of mechanical and manufacturing engineering.	9. Communicate professionally and effectively within and outside of mechanical and manufacturing engineering.
Level 1 Core Courses									
COMP1511 Programming Fundamentals	Developed			Developed		Developed			Developed
COMP1911 Computing 1A	Developed			Developed		Developed			Introduced
DESN1000 Introduction to Engineering Design and Innovation	Introduced	Introduced		Introduced	Developed		Developed	Developed	Developed
ELEC1111 Electrical Circuit Fundamentals	Developed	Introduced		Developed		Developed		Developed	
ENGG1300 Engineering Mechanics	Introduced	Introduced							Introduced
ENGG1811 Computing for Engineers	Developed			Developed		Developed			
MATH1131 Mathematics 1A	Developed			Developed		Developed			Developed
MATH1141 Higher Mathematics 1A	Developed			Developed		Developed			Developed
MATH1231 Mathematics 1B	Developed			Developed	Developed	Developed			Developed
MATH1241 Higher Mathematics 1B	Developed			Developed	Developed	Developed			Developed
MMAN1130 Design and Manufacturing		Introduced	Introduced	Introduced	Developed	Introduced	Introduced	Introduced	

PHYS1121 Physics 1A	Developed	Developed		Developed				Developed	Developed
PHYS1131 Higher Physics 1A	Developed	Developed		Developed				Developed	Developed
Level 2 Core Courses									
DESN2000 Engineering Design and Professional Practice				Introduced	Introduced		Developed	Developed	Developed
ENGG2400 Mechanics of Solids 1		Developed		Introduced				Developed	Developed
ENGG2500 Fluid Mechanics for Engineers		Developed							
MATH2018 Engineering Mathematics 2D	Developed	Developed	Developed	Developed					
MATH2019 Engineering Mathematics 2E	Developed	Developed	Developed	Developed					
MATH2089 Numerical Methods and Statistics	Developed	Developed	Developed	Developed					
MMAN2300 Engineering Mechanics 2		Developed							Developed
MMAN2700 Thermodynamics		Developed							
Level 3 Core Courses									
DESN3000 Strategic Design Innovation		Developed	Developed		Proficient		Proficient	Proficient	Proficient
MANF3510 Process Technology and Automation		Proficient	Introduced	Proficient	Developed	Developed	Developed	Developed	Developed
MECH3110 Mechanical Design 1		Developed	Developed	Developed	Developed		Developed	Developed	Developed
MMAN3200 Linear Systems and Control		Developed		Developed		Developed			
Level 4 Core Courses									
MANF4150 Design of Intelligent Manufacturing Systems	Introduced	Developed		Introduced	Developed	Developed	Introduced	Introduced	Introduced
MANF4430 Reliability and Maintenance Engineering	Proficient	Proficient	Proficient	Proficient		Proficient	Proficient	Proficient	Proficient
MANF4611 Process Modelling and Simulation	Proficient	Developed		Proficient	Developed	Proficient	Proficient	Introduced	Proficient
MMAN4400 Engineering Management		Proficient	Developed	Proficient	Developed		Developed	Developed	Developed
Thesis Courses									
MMAN4951 Thesis A		Proficient	Proficient	Proficient			Proficient		Proficient
MMAN4952 Thesis B		Proficient	Proficient	Proficient			Proficient		Proficient
MMAN4953 Thesis C		Proficient	Proficient	Proficient			Proficient		Proficient
Recommended Disciplinary Electives									
ENGG3741 Introduction to Nuclear Engineering	Developed	Developed	Proficient	Developed	Proficient		Developed	Proficient	Developed
MANF6860 Strategic Manufacturing Management		Introduced	Introduced	Introduced			Introduced	Introduced	Introduced
MANF9400 Industrial Management	Developed	Developed	Introduced	Introduced	Developed	Developed	Developed	Introduced	Introduced

MANF9420 Operations and Supply Chain Management in Engineering				Introduced	Introduced		Introduced	Introduced	Introduced
MANF9472 Production Planning and Control							Introduced	Introduced	Introduced
MATS1110 Introduction to Materials for Engineering Applications	Developed	Developed	Developed	Developed	Developed			Developed	Developed
MMAN4200 Additive Manufacturing	Introduced	Developed	Introduced	Developed	Introduced	Developed	Developed	Introduced	Developed
MMAN4250 Micro/Nanofabrication and Technology	Developed	Proficient	Proficient	Proficient	Proficient	Developed		Developed	
MMAN4410 Finite Element Methods	Developed	Proficient					Proficient		Proficient
MMAN9350 Digital and Artificial Intelligence Technologies for Engineering Applications	Developed	Proficient		Proficient		Proficient			
Discipline Electives									
AERO9500 Space Systems Architectures and Orbits	Proficient			Developed	Introduced				Introduced
AERO9610 The Space Segment		Proficient			Proficient	Introduced	Developed		
AERO9660 Advanced Aerospace Propulsion		Developed		Developed	Proficient			Developed	
COMP3331 Computer Networks and Applications	Developed	Developed	Proficient	Developed		Proficient		Developed	Developed
ENGG2600 Engineering Vertically Integrated Project	Introduced	Developed		Developed	Developed	Introduced	Developed	Developed	Developed
ENGG3001 Fundamentals of Humanitarian Engineering		Developed	Developed		Developed		Developed	Proficient	Proficient
ENGG3060 Rehabilitation and Assistive Technology		Developed		Developed	Proficient		Proficient	Proficient	Proficient
ENGG3600 Engineering Vertically Integrated Project	Developed	Proficient		Proficient	Proficient	Developed	Proficient	Proficient	Proficient
ENGG4600 Engineering Vertically Integrated Project	Developed	Proficient		Proficient	Proficient	Developed	Proficient	Proficient	Proficient
ENGG4841 Systems Engineering Fundamentals		Developed	Developed	Developed	Proficient	Developed	Proficient		Developed
MECH4100 Mechanical Design 2		Proficient		Proficient	Proficient		Proficient	Proficient	Proficient
MECH4305 Fundamental and Advanced Vibration Analysis	Proficient	Proficient	Developed	Developed					Developed
MECH4320 Engineering Mechanics 3									
MECH4620 Computational Fluid Dynamics	Developed	Developed		Developed		Developed	Developed		
MECH4770 Fundamentals and Design of Electrochemical Energy Storage Systems		Proficient	Proficient	Proficient	Proficient		Proficient	Proficient	
MECH4880 Refrigeration and Air Conditioning 1		Developed	Developed	Developed	Developed			Proficient	
MECH4900 Mechanics of Fracture and Fatigue		Developed	Developed	Proficient					

MECH9325 Fundamentals of Acoustics and Noise		Developed	Proficient	Developed	Developed			Proficient	
MECH9420 Composite Materials and Mechanics	Proficient	Proficient	Proficient	Proficient	Proficient		Proficient	Proficient	Proficient
MECH9650 Applied Bio and Microfluidics		Proficient	Developed	Developed	Proficient	Developed		Proficient	Proficient
MECH9720 Solar Thermal Energy Design	Developed	Developed	Developed	Proficient	Developed				Developed
MECH9761 Automobile Engine Technology	Developed	Proficient	Proficient	Developed	Developed	Developed		Proficient	Proficient
MTRN4231 Robotics Project	Developed	Developed			Developed	Proficient	Developed	Developed	Developed
MTRN9400 Control of Robotic Systems	Introduced					Introduced			
SOLA5052 Bioenergy and Renewable Fuels		Proficient		Proficient	Developed		Developed	Proficient	
SOLA5053 Wind Energy Converters		Developed	Developed	Proficient	Proficient		Developed	Proficient	
SOLA5056 Sustainable Energy for Developing Countries		Developed	Developed	Developed	Proficient		Proficient	Developed	Proficient
SOLA5057 Energy Efficiency		Proficient	Developed	Proficient	Developed		Proficient	Proficient	Proficient



7. Assessments

A complete overview of the assessment types is provided in Figures 1-3. Figure 1 shows assessment distribution for all specialisation courses, while Figures 2 and 3 show assessment distribution for core and elective courses, respectively.

Analysis of assessment distribution in core courses (Figure 2) reveals a balanced approach between invigilated/secured exams and applied tasks. Tests and Examinations combined make up 43.48%, ensuring rigorous verification of individual knowledge. However, there is a strong emphasis on Assignments (17.39%) and Reports (10.87%), alongside Lab work (8.70%), reflecting the specialisation's focus on process analysis and engineering management.

Analysis of assessment distribution in elective courses (Figure 3) shows a distinct shift towards project-based and applied learning. Assignments (26.76%) become the dominant assessment mode, supported by Projects (10.56%) and Reports (9.86%). This distribution enables students to engage in complex, open-ended manufacturing problems, system designs, and case studies that mimic real-world industrial scenarios.

The thesis pathway scaffolds independent research and professional work, with students demonstrating progressive capability through draft chapters, literature reviews, methodology reports, and final thesis documents. These courses provide extensive formative feedback through regular supervisor meetings and milestone reviews.

Reflective practice and peer assessment are embedded throughout the program to develop metacognitive awareness and critical evaluation skills. Design courses require students to maintain design journals documenting their learning process, design iterations, and team collaboration experiences. The School has implemented many processes to ensure that academic integrity is maintained:

- All exam papers are reviewed by another academic, along with worked solutions.
- Online exams use as much randomisation as practically possible for the question type (question banks, numerical input randomisation and in some cases multiple parallel versions of questions with slightly different solution paths). Post-COVID online assessments are generally discouraged throughout all courses in the school to guarantee academic integrity.
- For many exam-style assessments, pen and paper answers are uploaded to Moodle via an ExamScan process managed by faculty. This improves marking procedures, especially when done at scale in large courses.
- In-person lab activities have been centre stage in our program and have been increased substantially as our programs have moved back to in-person face-to-face delivery modes.

- Academics are encouraged to include open-ended elements in all their examination questions, with students answering short essay-style questions. This enables the marker to check the alignment between simple answers and comprehension.
- Reports are submitted using TurnItIn, which ensures that students are not plagiarising or colluding, but does not deter some forms of contract cheating.
- Model report/assignment rubrics have been provided to reward open-ended and creative solutions by students to discourage collusion and contract cheating. These have shown some initial promise, but much more evaluation and testing are required.
- Important works, such as thesis, have two (or three) markers to ensure consistency.
- Some courses have taken on viva-style assessments for all students, but these have proved challenging at scale without centralised support for scheduling.

MECHANICAL AND MANUFACTURING ENGINEERING

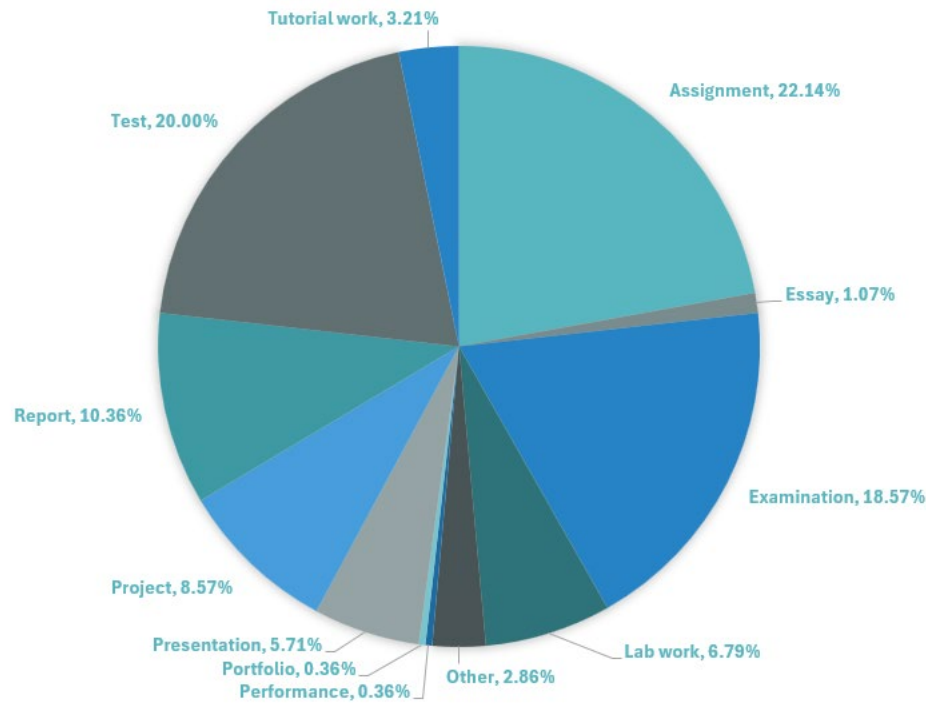


Figure 1. Percentage of assessment types used within the specialisation.

MECHANICAL AND MANUFACTURING ENGINEERING CORE

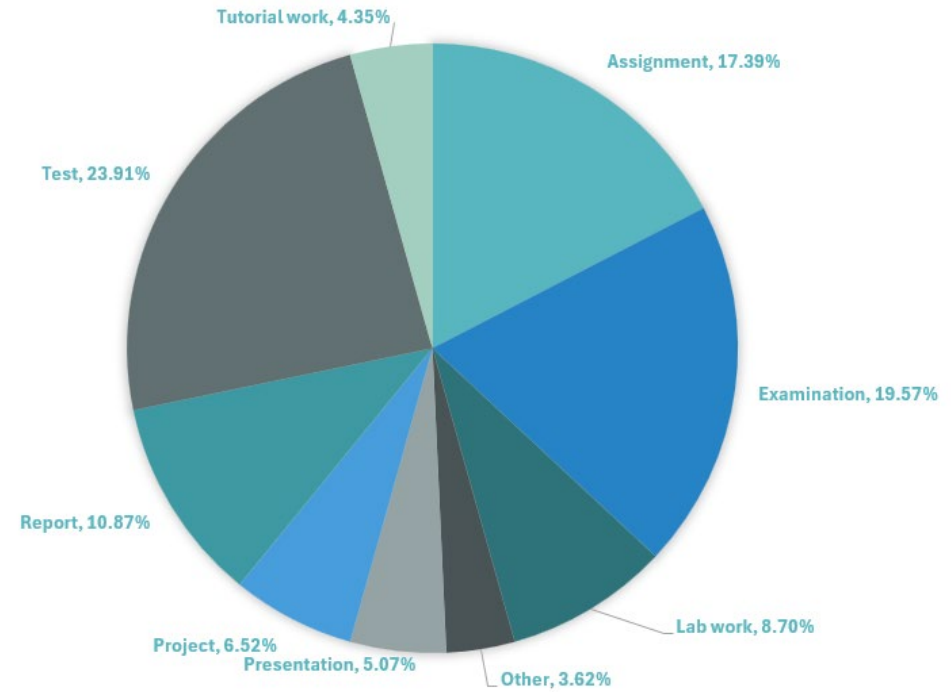


Figure 2. Percentage of assessment types used within the core of the specialisation.

MECHANICAL AND MANUFACTURING ENGINEERING ELECTIVES

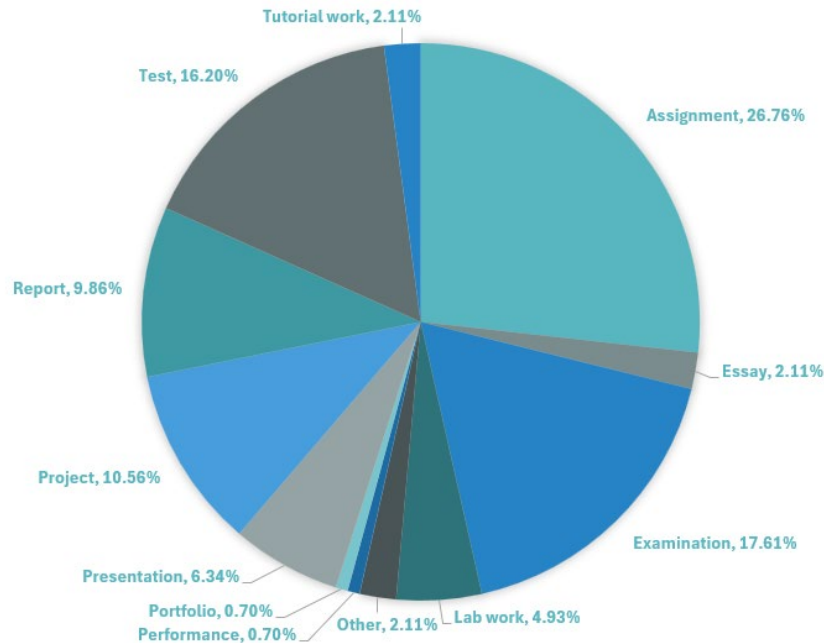


Figure 3. Percentage of assessment types used within the electives of the specialisation.

8. Specialisation Progression Plan

The structure of the MANFBH specialisation ensures that graduate-level capabilities are developed through science and programming courses in Year 1, core courses in Years 2 and 3, and specialised knowledge in Manufacturing Systems and Management in Year 4. This scaffolding approach allows students to reflect on their learning, enabling them to self-assess and develop graduate capabilities aligned with their interests or career aspirations.

To this end, students are supported in monitoring and adjusting their study progress through UNSW's official advising channels. Program information and enrolment support are provided through The Nucleus: Student Hub. Specialisation-specific level support is provided by designated year advisors who are appointed by the School. A study plan specific to each term entry and a progression checklist is provided to the student. In addition, the myPlan online tool combines the study plans progression checklist into a single interactive tool that allows students and staff to plan courses, view prerequisites, and track progress toward graduation in real time.

Each term, students use myPlan to confirm which requirements they have completed, which remain, and which prerequisite sequences apply, which supports self-checking of readiness for later-stage courses and informed elective selection.

Students can track their progression through the “myPlan” checker tool.

[myPlan | Current Students - UNSW Sydney](#)

A progression checklist and/or study plan is also available for students for the single degree and the double degree offerings.

[Progression checksheets & study plans | Engineering - UNSW Sydney](#)