MECHANICAL AND MANUFACTURING ENGINEERING

This degree is a full mechanical engineering degree with the benefit of additional specialisation in manufacturing engineering. It gives you the best of both worlds, as it is vital for modern engineers to possess the skills to design, produce and commercialise their products. Our MEMA stream builds on knowledge gained from mechanical engineering courses with a set of course electives focussed on industrial technology and automation, finance and decision-making, process design, computer-aided design and manufacturing, and engineering management.

“I knew from early on that engineering was for me. I chose Mechanical and Manufacturing Engineering because it offered a highly practical and versatile set of skills that can be applied to many industries outside of traditional manufacturing. It involves a lot more day-to-day problem-solving and conceptual design of products or processes, which appeals to my creative side. I was fortunate enough to receive a UNSW Co-op Scholarship, and I was also able to gain 18 months industry experience with three world-class companies before graduating.”

UNSW ENGINEERING

Not only are we the largest engineering faculty in Australia with the widest choice of degrees through our nine schools, we also have 65 years of experience, passionate academics, brilliant engineering researchers and partnerships with government and industry, both here and overseas. It’s no wonder we are the #1 engineering faculty in the country.”

APPLICATION INFORMATION

For everything you need to know about applying to UNSW Engineering, including scholarships and our alternative entry options, visit our faculty website at engineering.unsw.edu.au

FIND OUT MORE ABOUT MECHANICAL AND MANUFACTURING ENGINEERING

T: +61 2 9385 4093
E: mech@unsw.edu.au
W: mech.unsw.edu.au

WHAT DO MECHANICAL AND MANUFACTURING ENGINEERS DO?

Mechanical engineers have traditionally played the major role in the analysis and design of products, machinery, energy transformation and electro-mechanical processes. Manufacturing engineers allow these designs to be produced in a factory or industrial setting.

CAREER OPPORTUNITIES

As an engineer trained in mechanical and manufacturing engineering, not only can you be employed in the traditional mechanical engineering functions of design and testing, but also in process design, computer-aided design and manufacturing, quality engineering, technical and commercial analysis, consulting, sales support, and maintenance. This degree gives you great flexibility in terms of career choices. We aim to prepare you for rapid deployment and advancement in a diverse set of mechanical engineering functions.
BE (HONS) IN MECHANICAL AND MANUFACTURING ENGINEERING

LENTH OF STUDY: 4 years
UAC CODE: 425050
2014 CUT-OFF: 91.08

All degrees offered by the School of Mechanical and Manufacturing Engineering (except mechatronic engineering) have a common first two years – that means you don’t need to decide on your specialisation until after that. There are also a number of dual degrees available which offer students the opportunity to complete two degrees in five (or six) years.

ALTERNATIVE DEGREES

Alternative degrees are available – check out our website for more information.

SCHOOL OF MECHANICAL AND MANUFACTURING ENGINEERING

We have been a leading educational provider for 65 years, and with over 1500 undergraduate students and 90 staff members we are the largest mechanical engineering school in Australia. Students can choose from five engineering sub-disciplines – aerospace, mechanical, mechanical and manufacturing, mechatronic and naval architecture – and are inspired and guided by passionate teaching staff and researchers.

- New state-of-the-art building under construction
- Ultra-modern teaching labs, including a dedicated undergraduate teaching space
- Cutting-edge research facilities
- Strong partnerships with industry in education, research, industrial training and employment

DEGREE OPTIONS

Dual Degrees:
You can combine your Bachelor of Engineering (Honours) with a number of degrees from across the University, including Arts, Commerce, Law, and Science.

For the latest on your dual degree options, visit engineering.unsw.edu.au or search the online handbook at handbook.unsw.edu.au

ALTERNATIVE DEGREES YEARS UAC CODE
BE (Hons) in Aerospace Engineering 4 years 425050
BE (Hons) in Mechanical Engineering 4 years 425050
BE (Hons) in Mechatronic Engineering 4 years 425020
BE (Hons) in Civil Engineering 4 years 425050
BE (Hons) in Naval Architecture 4 years 425050

INFORMATION PROVIDED ON SUBJECTS, UNITS, COURSES AND ANY ARRANGEMENTS FOR COURSES INCLUDING STAFFING ARE AN EXPRESSION OF INTENT ONLY AND ARE NOT TO BE TAKEN AS A FIRM OFFER OR UNDERSTANDING. THE SCHOOL OF MECHANICAL AND MANUFACTURING ENGINEERING, UNSW RESERVES THE RIGHT TO DISCONTINUE OR VARY SUCH SUBJECTS, UNITS, COURSES, OR ARRANGEMENTS AT ANY TIME WITHOUT NOTICE AND TO IMPOSE LIMITATIONS ON ENROLMENT IN ANY COURSE.

Graduate with Honours
Our Bachelor of Engineering (Honours) degree is competitive and challenging, and requires students to perform at a high level to graduate. This ensures graduates are equipped with the skills and knowledge for a successful career as a professional engineer.

ASSUMED KNOWLEDGE

HSC Mathematics Extension 1 and Physics.

RECOMMENDED KNOWLEDGE

HSC Mathematics Extension 2 or Chemistry or Engineering Studies or Software Design and Development or Information Processes and Technology.

BRIDGING COURSES

Bridging Courses are available – check out our website for more information.

INDUSTRIAL EXPERIENCE

We love to produce graduates who are ready to hit the ground running, so we make it a compulsory part of the degree to complete at least 60 days of approved industrial training. Students can do this within Australia or overseas and many students are offered jobs as a result of their experience. To help you connect with employers, the School hosts an annual Students Meet Industry Night.

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Eb (Hons) in Naval Architecture
Eb (Hons) in Mechatronic Engineering
Eb (Hons) in Mechanical Engineering
Eb (Hons) in Aerospace Engineering

YEAR 1 SEMESTER 1
Engineering Design and Innovation ENGG1000 6
Physics 1 or Higher Physics 1A PHYS1121 6
Maths IA or Higher Maths IA MATH1111 6
Faculty 1st Year Elective ELECTIVE 6

YEAR 1 SEMESTER 2
Computing for Engineers or Computing 1A ENGG1811 6
Engineering Mechanics 1 MMAN1300 6
Maths IB or Higher Maths IB MMATH1231 6
Faculty 1st Year Elective ELECTIVE 6

YEAR 2 SEMESTER 1
Design and Manufacture MMAN1130 6
Mechanics of Solids 1 MMAN2400 6
Thermodynamics MMATH2700 6
Engineering Mathematics 2E MMATH2019 6

YEAR 2 SEMESTER 2
Electrical and Telecommunications Engineering ELECT1111 6
Engineering Design 2 MMAN2100 6
Engineering Mechanics 2 MMAN2300 6
Fluid Mechanics MMAN2600 6

YEAR 3 SEMESTER 1
Product and Manufacturing Design MANF3100 6
Linear Systems and Control MMAN3200 6
Numerical Methods and Statistics MATH2089 6
General Education GEN ED 6

YEAR 3 SEMESTER 2
Process Technology and Automation MANF3510 6
Mechanical Design 1 MECH3110 6
Professional Engineering and Communication MMAN3000 6
General Elective GEN ED 6

YEAR 4 SEMESTER 1
Thesis A MMAN4010 6
Design and Analysis of Product-Process Systems MANF4100 6
Process Modelling and Simulation MANF4611 6
Professional Elective 1 ELECTIVE 6

YEAR 4 SEMESTER 2
Thesis B MMAN4020 6
Engineering Management MMAN4400 6
Reliability and Maintenance Engineering MANF4430 6
Professional Elective 2 ELECTIVE 6

SAFETY NOTICE

UNSW has a Health and Safety Management System that is implemented across all its campuses. The safety management system is designed to ensure the health and safety of all members of the University. UNW reserves the right to discontinue or vary any subjects, units, courses, or arrangements at any time without notice and to impose limitations on enrolment in any course.

Last updated 8/1/2014

More information.