

Manufacturing Engineering and Management Postgraduate coursework programs

Never Stand Still

Engineering

Mechanical and Manufacturing Engineering

YOUR FUTURE. YOUR CHOICE.

Manufacturing engineers are involved at all facets of production with broad knowledge across the design and operation of machines and systems, therefore they are often called upon to manage multidisciplinary teams. Advanced study in manufacturing engineering offers a distinct advantage and could be the key to unlock an exciting and challenging future career.

UNSW Engineering's Manufacturing Engineering and Management program integrates engineering, technology and management providing students with a thorough grounding in everything from product design to manufacture, sales and distribution. Students develop strong leadership, financial and manufacturing evaluation as well as project management skills, essential to excel in the current dynamic market place.

SCHOOL OF MECHANICAL AND MANUFACTURING ENGINEERING

We are the largest Mechanical Engineering school in Australia with more than 1500 students. We offer a comprehensive range of Mechanical and Manufacturing Engineering courses with a firm emphasis on conceptual and analytical topics plus a projectbased component. Our flexible delivery methods are adaptable to busy professionals.

Students benefit from our strong connections with industry in education and research. And with our new state-of-the-art building well under construction, we will soon offer even better facilities including ultra-modern teaching labs and cutting-edge research facilities so the engineers of the future can collaborate, innovate and create like never before.

COURSEWORK PROGRAMS

- Master of Engineering Science (Manufacturing Engineering and Management)
- Graduate Diploma of Engineering Science (Manufacturing Engineering and Management).



MASTER OF ENGINEERING SCIENCE

THE DEGREE OF CHOICE FOR THE ENGINEERING PROFESSIONAL

The **Master of Engineering Science program** at UNSW Engineering is designed especially for graduate engineers seeking to develop or enhance their careers through cross-training, re-training and specialisation.

Our courses are packed with stimulating and comprehensive content that will inspire you to learn more and stay connected to your exciting engineering future. An extensive research component ensures every graduating student is armed with advanced practical and analytical skills.

PROGRAM OPTIONS	PROGRAM CODE	UNITS OF CREDIT	DURATION*	COMMENCE
Master of Engineering Science (Manufacturing Engineering and Management)	MANFCS8338	96	2 years	Feb, Jul
Graduate Diploma of Engineering Science (Manufacturing Engineering and Management)	MANFFS5341	48	1 year	Feb, Jul

* Eligible students may apply for credit for up to eight courses (48 UOC) of the Master of Engineering Science or four courses (24 UOC) of Graduate Diploma programs depending on previous study and professional experience.

TYPICAL PROGRAM STRUCTURE

This program covers a range of essential topics in product and process design, manufacture and delivery process aimed at achieving quality, timely delivery, minimum cost and flexible manufacturing through good manufacturing practices. Courses are especially suited to engineers in management roles with operational, engineering, and/or research and development responsibilities. Qualified students can choose to enter at Masters level, but those who have less time (or who would like just a taste of postgraduate study) can begin with the Graduate Diploma.



DISCIPLINARY KNOWLEDGE COURSES

Students can choose from:

- MANF4100 Design and Analysis of Product-Process Systems
- MANF4430 Reliability and Maintenance Engineering
- MANF4611 Process Modelling and Simulation
- MANF6860 Strategic Manufacturing Management
- MMAN4400 Engineering Management.

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students can choose from:

- MANF9400 Industrial Management
- MANF9420 Operations and Supply Chain Management in Engineering
- MANF9472 Production Planning and Control
- MANF9543 Computer Aided Design / Computer Aided Manufacture
- MANF9544 Concurrent Product and Process Development.

ELECTIVES

Students must include at least one of the Engineering and Technical Management courses (6 UOC) from the following list:

- GSOE9340 Life Cycle Engineering
- GSOE9810 Process and Product Quality
 in Engineering
- GSOE9820 Engineering Project Management
- GSOE9830 Economic Decision Analysis
 in Engineering
- GSOE9840 Process Improvement and Maintenance Engineering.

Students may choose the remainder of the electives from the Advanced Disciplinary Knowledge Courses listed above, from the Engineering and Technical Management courses and from the list of approved courses from other schools, as long as the student is eligible to enrol.

Please note that not all of these courses will be available in each semester. A full and current list of courses is available online in the UNSW Handbook.

RESEARCH

Students must complete a research component of 18 UOC, giving them the opportunity to broaden their understanding of something that they are passionate about through practical application with the close support of a supervisor. Both Masters and Graduate Diploma students are required to take a 6 UOC postgraduate coursework research essentials course.

- GSOE9010 Engineering Postgraduate Coursework Research Essentials
- MMAN9001 MEngSc Project A
- MMAN9002 MEngSc Project B.

ENTRY REQUIREMENTS

Masters: Students need a recognised four year Bachelor degree in an appropriate area of engineering with at least Honours II/2 or equivalent.

Graduate Diploma: Students need a three or four year degree in a relevant discipline of engineering or science plus relevant professional experience. The Graduate Diploma is a common pathway to the Master of Engineering Sciences.

EXEMPTIONS OR ADVANCED STANDING

Students may be granted credit for some courses. Those with a four year honours degree (for example in Manufacturing or Industrial Engineering) can apply for credit for up to 48 UOC for the Masters (effectively reducing it to one year full time) or 24 UOC for the Graduate Diploma. Full details can be found on the program handbook page.

STUDENT TESTIMONIAL

"There are numerous opportunities to participate in industrial and academic projects supervised by leading professors and scholars, allowing your problem-solving skills to be applied to real-world cases rather than just assignments and quizzes. Compared to other engineering disciplines, Manufacturing Engineering and Management provides me with opportunities to learn how to use both engineering and scientific principles to plan, design, implement and manage complex industrial systems."

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WHY UNSW ENGINEERING?

UNSW Engineering is the largest Engineering Faculty in Australia. We continue to foster and develop elite-level engineers across a broad range of disciplines exposing them to world-class innovation, cutting-edge research and dedicated teaching staff. As such, we are recognised as Australia's top Engineering university.*

WHY NOT JOIN US?

- **Cutting-edge programs** be inspired by our research-led, industry-relevant curriculum.
- Real-world focus continually updated programs ensure graduates are armed with the very latest knowledge and techniques to be able to stand at the top of their field.
- **Flexibility** programs can be tailored to suit your interests, entry points twice a year out-of-hours classes.

TAKING THE NEXT STEP

HOW TO APPLY

To gain entry to UNSW you'll need to successfully meet both the academic entry requirements and the English language requirements. For assistance with the application process, contact a UNSW official representative at *international.unsw.edu.au/contact-us*

Apply online at apply.unsw.edu.au

The UNSW Apply Online service has quick links to key information for applicants, including the application tracking service which allows you to check the progress of your application.

Closing Dates

Semester One (February): Applications must be lodged by 30 November. Semester Two (July): Applications must be lodged by 30 May. Not all programs have a Semester Two start date.

Late applications

Late applications will be accepted after the closing dates subject to the availability of places. Please note that whilst UNSW endeavour to process applications as quickly as possible, due to time constraints it cannot be guaranteed that a late application will be processed in time for semester commencement.

International Students

Applications are made directly to UNSW Australia, via our Apply Online portal at **apply.unsw.edu.au** For more information on what you need and how to apply go to **international.unsw.edu.au**

Most international students will require a student visa to study in Australia (application and processing of this visa may take some time). More information can be found at *international.unsw.edu.aullivingsydney/visas/*

SCHOLARSHIPS

There are a number of scholarships available for eligible students. To find out more about available postgraduate scholarships, eligibility and application process go to *scholarships.unsw.edu.au*

FEES

A postgraduate coursework fee calculator for both domestic and international students can be found at **apply.unsw.edu.au**

ACCOMMODATION

UNSW offers a range of accommodation options, visit *housing.unsw.edu.au* for full details.

STUDENT LIFE

At UNSW there is an abundance of support available to students. To find out more about studying at UNSW, visit **unsw.edu.au** and search for Student Life.

* Shanghai Jiao Tong University's Academic Ranking of World Universities in Engineering/Technology and Computer Sciences 2014. CRICOS Provider Code: NSW 00098G



in Australia according to Shanghai Jiao Tong University's Academic Ranking of World Universities in Engineering/ Technology and Computer Sciences 2014.

than any other university in Australia. (Crunchbase Report 2013)





18% of the **top 100** most influential engineers in Australia are UNSW Graduates* *Engineers Australia Top 100 list in 2014

CONTACT US

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