Materials Science and Engineering

The School of Materials Science and Engineering combines science and technology to develop practical solutions to make a difference in a technology-enabled society.

Materials Science and Engineering is about developing the very best materials for a range of applications including aerospace, automotive, biomedical and IT-based industries. Ranked as Australia’s #1 materials school, we are connected to industry through a network of partnerships, including those with ANSTO, Boral, Bureau Veritas, Cochlear, CSIRO, Gujarat NRE Minerals, Hitachi Chemical Limited, OneSteel and Weir Minerals. By working closely with industry, students are guaranteed a study experience which combines research and practical application for real-world challenges.

Undergraduate Studies in Materials Science and Engineering

Materials Science is the underlying science of high-performance materials including metals, ceramics and plastics, electronic materials, nanomaterials, composites and biomaterials. Materials scientists are involved in every aspect of technology, ranging from the design of materials for use in integrated circuits and medical implants, through to materials needed for green energy generation.

Admissions Details

Program | UAC code | UNSW program code | Length of study | Cut-off
--- | --- | --- | --- | ---
Bachelor of Materials Science and Engineering | 429600 | 3131 | 4 years full-time | ATAR 90.00 IB 31 Or equivalent
Bachelor of Materials Science and Engineering/Biomedical Engineering | 429630 | 3133 | 5 years full-time | ATAR 91.00 IB 34 Or equivalent
Bachelor of Materials Science and Engineering/Chemical Engineering | 429620 | 3137 | 5 years full-time | ATAR 91.00 IB 34 Or equivalent
Bachelor of Materials Science and Engineering/Commerce | 429610 | 3138 | 5.5 years full-time | ATAR 96.30 IB 38 Or equivalent
Bachelor of Science | 429600 | 3970 | 3 years full-time | ATAR 94.45 IB 31 Or equivalent
Bachelor of Science (Advanced) | 429550 | 3972 | 4 years full-time | ATAR 95.00 IB 37 Or equivalent
Bachelor of Science (International) | 429420 | 3987 | 4 years full-time | ATAR 87.00 IB 35 Or equivalent
Bachelor of Science and Business | 429100 | 3925 | 3 years full-time | ATAR 92.00 IB 37 Or equivalent

Dual Degrees

Dual degrees enable students to combine a Science program with a program from another faculty offering greater flexibility to explore individual interests, expand skill bases and broaden career prospects.

Specialist degrees:

Bachelor of Engineering (Materials Science and Engineering) / Bachelor of Science

The Bachelor of Engineering (Materials Science and Engineering) / Bachelor of Science is a four-year program, combining the Bachelor of Engineering (Materials Science and Engineering) with a Bachelor of Science. This program allows students to develop a strong foundation in materials science and engineering, as well as in a range of science disciplines, such as chemistry, physics, biology, and computer science. The program prepares students for careers in both materials science and engineering and related science fields.

Bachelor of Science

This program is designed for students who wish to major in science but also want to gain an understanding of the principles of materials science and engineering. It provides a strong foundation in the fundamentals of science and offers a wide range of elective courses in materials science and engineering.

Our graduates are able to work in diverse, future-focused and innovative fields; from niche ceramics to filtration systems and print devices. Students benefit from our ongoing investment to provide world-class facilities including a new $145 million Materials Science and Engineering building.

The Materials Science and Engineering major can be studied within the following degree programs:

Bachelor of Science
- Physical Science
- Geological Science
- Chemistry
- Mathematical Science

Chemical Engineering

This degree is specifically for students wishing to pursue a career in the related disciplines of materials engineering and chemical engineering, with professional accreditation in both disciplines. It is a new and unique combination of professional qualifications that no other Australian institution currently offers.

Bachelor of Science and Business

This degree is for students who wish to combine a major in business with a major in science or engineering, providing flexibility and choice as well as insights into different scientific fields.

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Career Opportunities

A degree in Materials Science and Engineering (MSE) can take you anywhere in almost any industry. Graduates of MSE at UNSW will be equipped to work in fundamental scientific research, manufacturing and materials processing, management, quality, safety, the environmental impact of materials and commercialisation of materials technologies.

Studying Material Science and Engineering could lead to a range of professions, including a Sustainable Processing Engineer, Energy and Electronics Engineer, Failure Analysts and Forensic Scientist, Composite Technologist, Materials Scientist, Extractive Metallurgist, Physical Metallurgist or Ceramicist – to name a few.

Our MSE graduates have recently been employed by a wide range of companies and organisations including BHP Billiton, Rio Tinto Aluminium, Cochlear Limited, Boston Consulting Group, Accenture Consulting, Anglo Coal Australia, Boral Bricks and BlueScope Research.

For further information regarding careers within the sphere of Materials Science and Engineering, visit our careers page on: www.materials.unsw.edu.au/future-students/careers

Student Testimonials

"The Materials Science degree is an excellent course that provides students with further knowledge and skills across engineering and science disciplines. It provides a great platform for graduates to continue to work in these fields or even branch out into finance or banking as these industries look to employ graduates from outside the traditional economics and finance areas. I have found it provided me with the technical and educational background to be a success in my chosen fields of pursuit."

Greg Bodkin – Class of 1987
BE (Materials Science and Engineering)
Senior Vice President Cochlear Limited

"I was drawn to the interdisciplinary possibilities of Materials Science. Bridging science and engineering, the subject matter had a good coverage of both the theory of why and how materials have the properties they do, and practical applications in industry.

Being both a scientist and engineer meant working with a diverse group of students and academics, so I had a fantastic time at UNSW. Many people still ask what we do and are surprised at how relevant our field is to many others; it’s a great conversation starter. In the later years, the close-knit community at MSE really shone through, especially the support we gave each other during our Honours thesis research projects."

Holstein Wong – Class of 2013
BE (Materials Science and Engineering)
1st Class Honours and University Medal in Ceramic Engineering
Graduate Engineer – Product Processing, BHP Billiton Mitsubishi Alliance

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