



UNSW Engineering

Bachelor of Engineering (Honours) (Biomedical Engineering)

What do biomedical engineers do?

Biomedical Engineering uses engineering techniques and analysis to solve problems and create solutions in medicine and health. Biomedical Engineers develop solutions to improve the diagnosis, treatment and quality of life of people with life-threatening or debilitating diseases and conditions.

What will your study involve?

The Bachelor of Engineering (Honours) (Biomedical Engineering) is a four-year degree with a focus on building practical experience through specialised work placements and industry projects. You'll gain foundational knowledge in biology, engineering principles and medicine throughout your degree and develop a multifaceted skill set to accelerate your career after graduation.

Students benefit from:

- A high-quality, industry-relevant biomedical educational program which utilises world-class facilities and technologies and gives you access to our alumni community
- Being embedded in research teams performing ground-breaking research across many areas of Biomedical Engineering
- Interactions with the Tyree Foundation Institute of Health Engineering which brings together clinicians, technologists and industry to develop new medical technologies

Program details

Lowest Selection Rank (2025): TBC

Duration: Four-year embedded honours degree

Study areas: biocompatibility, biomedical data analysis, biomaterials, biosensors, cell and materials technologies, computing for engineers, electrical circuit fundamentals, engineering design, mechanics of the human body and physiology

Assumed knowledge: Mathematics Extension 1, Physics

Portfolio Entry: UNSW offers the Faculty of Engineering Admission Scheme (FEAS) which is a pathway for students interested in studying undergraduate engineering to support their academic results, find out more at unsw.to/feas

Accreditation

Accreditation by Engineers Australia will be sought for this degree.

Career options


Graduates can pursue career opportunities in the medical device field, pharmaceutical and biotechnology industries, hospitals, regulatory bodies, research institutions and tertiary education institutions.

Example study plan

	Year 1	Year 2	Year 3	Year 4
Term 1	DESN1000 Engineering Design and Innovation	MATH2089 Numerical Methods and Statistics	BIOM9650 Biosensors	Thesis A
	ENGG1811 Computing for Engineers	BIOM9310 Biomaterials and Cell Technologies	BIOM9561 Mechanics of Biomaterials	BIOM9410 Regulatory Requirements of Biomedical Technology
	MATH1131 Mathematics 1A	PHSL2121 Principles of Physiology A		BIOM9711 Modelling Organs, Tissues and Devices
Term 2	MATH1231 Mathematics 1B	MATH2018 Engineering Mathematics 2D	BIOM9541 Mechanics of the Human Body	Thesis B
	PHYS1121 Physics 1A	BIOM9610 Bioelectronics and Physiological Measurement	BIOM9332 Biocompatibility	General Education
	MATS1101 Engineering Materials & Chemistry	DESN2000 Engineering Design and Professional Practice	Free Elective	Discipline Elective
Term 3	HESC2451 Musculoskeletal Biomechanics	BIOM9640 Biomedical Instrumentation	BIOM9920/9910 Health Technology Innovation	Thesis C
	ELEC1111 Electrical Circuit Fundamentals	Biomedical Data Analysis	Free Elective	General Education
			Discipline Elective	Discipline Elective

Biomedical Engineering electives:

Biological Signal Analysis	Cellular and Tissue Engineering	Bionics and Neuromodulation	Medical Imaging	Rehabilitation Engineering and Assistive Technology
Biomedical and Health Informatics	Mass Transfer in Medicine	Health Technology Innovation: Clinical Immersion	Health Technology Innovation: Healthcare Solutions	Applications of Light in Engineering, Technology and the Life Sciences
Pharmaceutical Design and Engineering	Materials and Processes for Biomedical Applications			

NOTES	You'll be required to complete 60 days of Industrial Training throughout your degree.		Visit the Degree Finder page here!
	This degree example is indicative only and subject to change at any time without prior notice. For the latest degree information visit the relevant UNSW Handbook page at www.handbook.unsw.edu.au .		
	UNSW's new 'flex-semester' calendar is scheduled to start in 2028. For more information see https://www.unsw.edu.au/academic-calendar-project .		