

PROGRAM PLAN

BACHELOR OF MEDICAL ENGINEERING (HONOURS)

Medical Biomechanics Major

PROGRAM OPTION:

Full time or Part time

START DATE:

Semester 2 2021

LOCATION:

Callaghan

This Program Plan is an enrolment guide to ensure you are on track to graduate. If at any time you wish to vary from this program plan seek advice from your Academic Program Advisor to ensure you remain on track.



[PROGRAM HANDBOOK](#)

NAME:



[COURSE HANDBOOK](#)

STUDENT NO.:

YEAR 1	SEMESTER 1	HUBS1109 Anatomy for Biomedical Science Anatomy Directed Course DIRECTED	MATH1110 Mathematics for Engineering, Science and Technology 1 CORE	ENGG2500 Sustainable Engineering Practice CORE	MECH1750 Materials 1 COMPULSORY
	SEMESTER 2	MATH2310 Calculus of Science & Engineering CORE	EXSS1040 Functional Anatomy <i>(Ourimbah Campus)</i> COMPULSORY	ENGG2300 Engineering Fluid Mechanics COMPULSORY	MECH2430 Mechanics of Solids 1 COMPULSORY
YEAR 2	SEMESTER 1	ENGG1500 Introduction to Professional Engineering CORE	MATH1120 Mathematics for Engineering, Science and Technology 2 CORE	HUBS1401 Human Bioscience HUBS Directed Course DIRECTED	HUBS1420 Terminology & Communication in Biomedicine HUBS Directed Course DIRECTED
	SEMESTER 2	ENGG1003 Introduction to Procedural Programming CORE	MECH1110 Introduction to Mechanical Engineering Design COMPULSORY	ENGG2100 Engineering Risk and Uncertainty COMPULSORY	EXSS2020 Biomechanics <i>(Ourimbah Campus)</i> COMPULSORY
YEAR 3	SEMESTER 1	ENGG3500 Managing Engineering Projects CORE	MENG3500 Regulatory Requirements for Medical Engineering CORE	MECH2110 Mechanical Engineering Design 1 COMPULSORY	MECH4410 Mechanics of Solids 2 & FEA COMPULSORY
	SEMESTER 2	MENG3800 Medical Engineering Research CORE	EXSS3060 Advanced Biomechanics <i>(Ourimbah Campus)</i> COMPULSORY	MECH3720 Thermodynamics COMPULSORY	DIRECTED Medical Biomechanics Directed Course DIRECTED
YEAR 4	SEMESTER 1	MENG3100 Biomaterials & Fluid Dynamics COMPULSORY	MENG4100 Implants & Assistive Technologies COMPULSORY	MENG4800B Medical Engineering Project B <i>This course must be taken following MENG4800A (20 units)</i> CORE	
	SEMESTER 2	MENG4800A Medical Engineering Project A CORE	ENGG4500 Engineering Complexity CORE	ENGG2440 Modelling and Control COMPULSORY	ELECTIVE ELECTIVE
YEAR 5	SEMESTER 1				

COMPULSORY PROFESSIONAL PRACTICE: INDUSTRIAL EXPERIENCE 12 WEEKS

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To be eligible to graduate make sure you have completed 320 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

- **Core and Compulsory Courses** – 270 units

Enrolment in maths courses is based on your assumed knowledge. To find out which MATH course you should enrol in please see the [Enrolling in Maths information](#). Students who do not meet the enrolment requisite for MATH1110 must take MATH1002. More information is in your [Program Handbook](#). Note that due to course offerings it is recommended midyear commencing students take MATH1110 and MATH1120, and that you also consider the University's [Summer School](#) offerings following your first semester.

- **Directed Courses** – 40 units, including the following:
 - 10 units of Anatomy Directed Courses
 - 20 units of Human Bioscience Directed Courses
 - 10 units of Medical Biomechanics Directed Courses

See page the next page of this Program Plan, and the [Program Handbook](#) for more information on Directed Course options.

- **Electives** – 10 units, visit the [Program Handbook](#) for more information. Students who do not meet the enrolment requisite for MATH1110 must take MATH1002. For these students MATH1002 will count as their 10 units of electives.
- It is also a requirement that students complete a total of 12 weeks of [industrial experience](#).
- The duration of this program is 4 year full-time (40 units per semester) or part-time equivalent.
- The maximum time to complete this program is 10 years.



Some courses have assumed knowledge and/or requisites, please refer to the individual [Course Handbook](#). Please refer to the [Program Handbook](#) for specific information on program structure. If you are intending varying from this program plan please seek advice from your [Academic Program Advisor](#).

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DIRECTED COURSES – Anatomy

Complete 10 units from:

HUBS1109 Anatomy for Biomedical Science (*Semester 1*)

HUBS1105 Musculoskeletal Anatomy (*Semester 2*)

It is strongly recommended that you complete your Anatomy Directed Course in your first year of study

DIRECTED COURSES – Human Bioscience

Complete 20 units, as follows:

HUBS1401 Human Bioscience (*Semester 1*) and;

HUBS1420 Terminology & Communication in Biomedicine (*Semester 1*)

OR

HUBS1403 Biomedical Science Part 1 (*Semester 1*) and;

HUBS1404 Biomedical Science Part 2 (*Semester 2*)

DIRECTED COURSES – Medical Biomechanics

Complete 10 units from:

CIVL1100 Fundamentals of Engineering Mechanics

PHYS1210 Advanced Physics I

ELEC1310 Introduction to Electrical Engineering

EXSS1050 Fundamentals of Exercise and Sport Science Practice (*Ourimbah Campus*)

EXSS1070 Physical Activity and Exercise Across the Lifespan (*Ourimbah Campus*)

EXSS1080 Psychological, Nutritional and Injury Foundations for Exercise and Sport Science (*Ourimbah Campus*)

HUBS1106 Head and Neck Anatomy (*Ourimbah Campus*)

HUBS1107 Neuroscience and Head and Neck Anatomy

MECH2360 Dynamics of Machines

EXSS2080 Growth, Development and Ageing (*Ourimbah Campus*)