

Bachelor of Engineering (Honours) (Mechanical) with Bachelor of Mathematical and Computer Sciences (Mathematics Major) Study Plans — Semester 1 Start

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Bachelor of Engineering (Honours) (Mechanical) with Bachelor of Mathematical and Computer Sciences - Mathematics Major – Study Plan Notes

Program structure

This is a five-year program with electives commencing in the second year. The final year contains the two-semester Research Project capstone course. Students may follow study plans specifying electives to complete a Major within the program. Successful completion of the Program with a Major requires completion of all courses specified in the that Major's study plan. All Majors consist of the same number of units and fill available electives slots, with five remaining to be chosen by the student.

Internships

All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies. The 8 weeks of internship must be supervised by a qualified engineer and may be completed in one placement or a series of placements. The Faculty recommends students undertake internships upon commencement of third year engineering courses. Internships are self-sourced and resources are available through [Careers Service](#). Register with CareerHub to access a database where opportunities are posted.

Mathematics Electives

Mathematics Electives may be chosen from the Mathematics courses listed in the Program Rules for the degree of Bachelor of Mathematical and Computer Sciences:
<https://calendar.adelaide.edu.au/faculty/ecms>

General Electives

How to choose an elective course in your area of interest?

Please refer to the steps via the link: <https://ecms.adelaide.edu.au/study-with-us/student-support/enrolment>

Program Rules

For academic program rules please refer to the following website: <https://calendar.adelaide.edu.au/faculty/ecms>

Information and Enrolment Advice

Ask ECMS

Email: askecms@adelaide.edu.au

Website: <https://ecms.adelaide.edu.au/study-with-us/student-support>

Bachelor of Engineering (Honours) (Mechanical)
with Bachelor of Mathematical and Computer Sciences - Mathematics Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	[^] ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	Major course / Elective Year 2 (see elective table) OR General Elective <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	Major course / Elective Year 3 (see elective table) OR General Elective <input type="checkbox"/>	Major course / Elective Year 3 (see elective table) OR General Elective <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	MECH ENG 3111 Acoustics and Vibrations <input type="checkbox"/>	Major course / Elective Year 3 (see elective table) OR General Elective <input type="checkbox"/>	Major course / Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note on page 2.				
Year 4				
S 1	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Major course / Elective Year 4 (see elective table) <input type="checkbox"/>	Major course / Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3004 Systems Engineering & Industry Practice <input type="checkbox"/>	Major course / Elective Year 4 (see elective table) <input type="checkbox"/>	Major course / Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Major course / Elective Year 4 <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4100B Research Project Part B <input type="checkbox"/>	Major course / Elective Year 4 <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Course	Major Course / Elective (see table)	Double Degree Courses
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[^] Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

Bachelor of Engineering (Honours) (Mechanical) – Aerospace Engineering Major
with Bachelor of Mathematical and Computer Sciences - Mathematics Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	[^] ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	MECH ENG 3100 Aeronautical Engineering <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	MECH ENG 3111 Acoustics and Vibrations <input type="checkbox"/>	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>	MECH ENG 3104 Space Vehicle Design <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note on page 2.				
Year 4				
S 1	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3004 Systems Engineering & Industry Practice <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	MECH ENG 4106 Aerospace Propulsion <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4100B Research Project Part B <input type="checkbox"/>	MECH ENG 4108 Aircraft Design <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Course	Major course	Elective (see table)	Double Degree Courses
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[^] Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

Bachelor of Engineering (Honours) (Mechanical) – Defence Systems Major
with Bachelor of Mathematical and Computer Sciences - Mathematics Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	[^] ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	MECH ENG 3026 Advanced Mechanics of Materials <input type="checkbox"/>	POLIS 1104 Introduction to Comparative Politics <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	MECH ENG 3111 Acoustics and Vibrations <input type="checkbox"/>	ENG 3305 Human Factors for Decision Making <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note on page 2.				
Year 4				
S 1	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3004 Systems Engineering & Industry Practice <input type="checkbox"/>	ENG 4020 Complex Systems Engineering <input type="checkbox"/>	ENG 4010 Defence Leadership <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4100B Research Project Part B <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Course	Major course	Elective (see table)	Double Degree Courses
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[^] Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

Bachelor of Engineering (Honours) (Mechanical) – Mechanical Engineering Major
with Bachelor of Mathematical and Computer Sciences - Mathematics Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	[^] ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	MECH ENG 3026 Advanced Mechanics of Materials <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	MECH ENG 3111 Acoustics and Vibrations <input type="checkbox"/>	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note on page 2.				
Year 4				
S 1	ENG 3005 Research Method & Project Management <input type="checkbox"/>	MECH ENG 4118 Finite Element Analysis of Structures <input type="checkbox"/>	MECH ENG 4111 CFD for Engineering Applications <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3004 Systems Engineering & Industry Practice <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	MECH ENG 4121 Materials Selection & Failure Analysis <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4100B Research Project Part B <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Course	Major course	Elective (see table)	Double Degree Courses
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[^] Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

Bachelor of Engineering (Honours) (Mechanical) – Mechatronics and Robotics Major
with Bachelor of Mathematical and Computer Sciences - Mathematics Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	[^] ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	ELEC ENG 2105 Electronic Circuits M <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	MECH ENG 3106 Mechatronics II <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	MECH ENG 3111 Acoustics and Vibrations <input type="checkbox"/>	MECH ENG 3032 Micro-Controller Programming <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note on page 2.				
Year 4				
S 1	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3004 Systems Engineering & Industry Practice <input type="checkbox"/>	MECH ENG 4102 Advanced PID Control <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	MECH ENG 4124 Robotics M <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4100B Research Project Part B <input type="checkbox"/>	MECH ENG 4123 Advanced Digital Control <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Course	Major course	Elective (see table)	Double Degree Courses
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[^] Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

Bachelor of Engineering (Honours) (Mechanical) – Medical Technologies Major
with Bachelor of Mathematical and Computer Sciences - Mathematics Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	[^] ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	ANAT SC 1102 Human Anatomy and Physiology IA <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	ENG 3101 Introduction to Medical Technologies <input type="checkbox"/>	PHYSIOL 2510 Physiology IIA <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	MECH ENG 3111 Acoustics and Vibrations <input type="checkbox"/>	ANAT SC 2009 Musculoskeletal Anatomy <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note on page 2.				
Year 4				
S 1	ENG 3005 Research Method & Project Management <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3004 Systems Engineering & Industry Practice <input type="checkbox"/>	MECH ENG 4101 Biomechanical Engineering <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4100B Research Project Part B <input type="checkbox"/>	ELEC ENG 4115 Biomedical Instrumentation <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Course	Major course	Elective (see table)	Double Degree Courses
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[^] Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

Bachelor of Engineering (Honours) (Mechanical) – Renewable Energy Major
with Bachelor of Mathematical and Computer Sciences - Mathematics Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	[^] ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	MECH ENG 2020 Materials & Manufacturing <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	ENTREP 3006 Energy Management, Economics & Policy <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	MECH ENG 3111 Acoustics and Vibrations <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note on page 2.				
Year 4				
S 1	ENG 3005 Research Method & Project Management <input type="checkbox"/>	MECH ENG 4064 Renewable Power Technologies <input type="checkbox"/>	MECH ENG 4112 Combustion Technology & Emission Control <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3004 Systems Engineering & Industry Practice <input type="checkbox"/>	ELEC ENG 4111 Distributed Generation Technologies <input type="checkbox"/>	CHEM ENG 4048 Biofuels, Biomass and Wastes <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4100B Research Project Part B <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Course	Major course	Elective (see table)	Double Degree Courses
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[^] Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

Bachelor of Engineering (Honours) (Mechanical) – Smart Technology Major
with Bachelor of Mathematical and Computer Sciences - Mathematics Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	[^] ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	COMP SCI 1102 Object Oriented Programming <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	COMP SCI 2103 Algorithm Design & Data Structures <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	MECH ENG 3111 Acoustics and Vibrations <input type="checkbox"/>	COMP SCI 3012 Distributed Systems <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note on page 2.				
Year 4				
S 1	ENG 3005 Research Method & Project Management <input type="checkbox"/>	COMP SCI 3001 Computer Networks & Applications <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3004 Systems Engineering & Industry Practice <input type="checkbox"/>	MECH ENG 3032 Micro-Controller Programming <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>
S 2	ENG 4100B Research Project Part B <input type="checkbox"/>	ELEC ENG 4107 Autonomous Systems <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>

Core Course	Major course	Elective (see table)	Double Degree Courses
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[^] Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

Bachelor of Engineering (Honours) (Mechanical) – Sports Engineering Major
with Bachelor of Mathematical and Computer Sciences - Mathematics Major

Year 1				
S 1	MATHS 1011 Mathematics IA <input type="checkbox"/>	[^] ENG 1001 Introduction to Engineering <input type="checkbox"/>	CEME 1004 Engineering Mechanics-Statics <input type="checkbox"/>	ELEC ENG 1101 Electronic Systems <input type="checkbox"/>
S 2	MATHS 1012 Mathematics IB <input type="checkbox"/>	ENG 1002 Programming (Matlab and C) <input type="checkbox"/>	CHEM ENG 1009 Materials I <input type="checkbox"/>	MECH ENG 1007 Engineering Mechanics – Dynamics <input type="checkbox"/>
Year 2				
S 1	MATHS 2106 Differential Equations for Engineers II <input type="checkbox"/>	MECH ENG 2100 Design Practice <input type="checkbox"/>	MECH ENG 2021 Thermo-Fluids I <input type="checkbox"/>	ANAT SC 1102 Human Anatomy and Physiology IA <input type="checkbox"/>
S 2	MATHS 2107 Statistics & Numerical Methods II <input type="checkbox"/>	MECH ENG 2002 Stress Analysis & Design <input type="checkbox"/>	MECH ENG 2019 Dynamics & Control I <input type="checkbox"/>	MECH ENG 2101 Mechatronics IM <input type="checkbox"/>
Year 3				
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics <input type="checkbox"/>	MECH ENG 3026 Advanced Mechanics of Materials <input type="checkbox"/>	MECH ENG 3107 Sports Engineering II <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	MECH ENG 3111 Acoustics and Vibrations <input type="checkbox"/>	MECH ENG 3101 Applied Aerodynamics <input type="checkbox"/>	Elective Year 3 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Internship				
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note on page 2.				
Year 4				
S 1	ENG 3005 Research Method & Project Management <input type="checkbox"/>	MECH ENG 4104 Advanced Topics in Fluid Mechanics <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
S 2	ENG 3004 Systems Engineering & Industry Practice <input type="checkbox"/>	MECH ENG 4101 Biomechanical Engineering <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level II/III Mathematics Elective <input type="checkbox"/>
Year 5				
S 1	ENG 4001A Research Project Part A <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>
S 2	ENG 4100B Research Project Part B <input type="checkbox"/>	Elective Year 4 (see elective table) <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>	Level III Mathematics Elective <input type="checkbox"/>

Core Course	Major course	Elective (see table)	Double Degree Courses
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[^] Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

Mechanical Engineering Electives

Not all Majors and Double Degrees permit electives in every semester slot.

Year 2					
S1	MECH ENG 2020 MECH ENG 2102	Materials & Manufacturing Sports Engineering I (not offered 2021)	S2	ELEC ENG 2106	Vector Calculus & Electromagnetics
Year 3					
S1	MECH ENG 3026 MECH ENG 3100 MECH ENG 3103 MECH ENG 3106 MECH ENG 3107	Advanced Mechanics of Materials Aeronautical Engineering Advanced Manufacturing Systems (not offered 2021) Mechatronics II Sports Engineering II	S2	ENG 3305 ENTREP 3900 MECH ENG 3032 MECH ENG 3101 MECH ENG 3104	Human Factors for Decision Making eChallenge Micro-Controller Programming Applied Aerodynamics Space Vehicle Design
WIN	PROJMGNT 3030	Project Logistics and Supply Chains			
Year 4					
S1	MECH ENG 4064 MECH ENG 4104 MECH ENG 4106 MECH ENG 4111 MECH ENG 4112 MECH ENG 4118 MECH ENG 4121 MECH ENG 4124 ENG 3201	Renewable Power Technologies (not offered 2021) Advanced Topics in Fluid Mechanics Aerospace Propulsion CFD for Engineering Applications Combustion Technology & Emission Control Finite Element Analysis of Structures Materials Selection & Failure Analysis Robotics M Essentials of Humanitarian Practice (TBC)	S2	MECH ENG 4100 MECH ENG 4101 MECH ENG 4102 MECH ENG 4105 MECH ENG 4107 MECH ENG 4108 MECH ENG 4120 MECH ENG 4123 MECH ENG 4125 ENG 3201	Advanced Topics in Aerospace Engineering Biomechanical Engineering Advanced PID Control Advanced Vibrations Air conditioning Aircraft Design Fracture Mechanics (not offered 2021) Advanced Digital Control Stresses in Plates & Shells (not offered 2021) Essentials of Humanitarian Practice (TBC)
SUM	MECH ENG 4115 MECH ENG 4126	Engineering Acoustics Topics in Welded Structures			