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### 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 24-unit Major and/or a 12-unit Minor within the program. Successful completion of the Program with a Major requires completion of all courses specified in that Major's study plan. All Majors consist of the same number of units and fill available electives slots, with one remaining to be chosen by the student.

#### **Alternative courses**

There are a small number of alternative course offerings that are not indicated in the study plans. TECH 1006 may be taken as a semester 2 alternative to CEME 1004. CEME 2001 may be taken as a semester 1 alternative to MECH ENG 2002. ENG 3004 and ENG 3005 may be taken in either semester. The consecutive pair ENG 4001A and ENG 4001B may commence in either semester.

#### **Hands on Training**

All Mechanical Engineering students are required to complete the ECMS Hands-On Training courses, information regarding this will be communicated via email to students.

#### Internships

All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies. Internships are self-sourced and further information can be found on the Engineering Internships web page: <a href="https://ecms.adelaide.edu.au/study-with-us/student-support/internships/engineering">https://ecms.adelaide.edu.au/study-with-us/student-support/internships/engineering</a>.

#### Science

Science Electives may be chosen from courses listed in the Program Rules for the degree of Bachelor of Science. Students must complete a major in accordance with the Program Rules for the Bachelor of Science: <u>https://calendar.adelaide.edu.au/faculty/sciences</u>

#### **General Electives**

How to choose an elective course in your area of interest? Please refer to the steps via the link: <u>https://ecms.adelaide.edu.au/study-with-us/student-support/enrolment</u>

#### **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: <u>askecms@adelaide.edu.au</u> Website: <u>https://ecms.adelaide.edu.au/study-with-us/student-support</u>



No Major

				Year	1			U
S 2	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CHEM ENG 1009 Materials I		TECH 1006 Engineering Mechanics Technology	
		-		Year	2	-		-
S S	*MECH ENG 1007 Engineering Mechanics – Dynamics							
S 1	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		MECH ENG 2100 Design Practice		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		Level I Science Elective	
				Year				
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2021 Thermo-Fluids I		Major course / Elective Year 2 (see elective table)		Level I Science Elective	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations				Level II Science Elective	
				Interns	hip			
	All Engineering students comment	ncing	from 2019 are required to complete a m	ninimun	n of 8 weeks of <u>internship</u> during the course	e of th	eir studies – see note on page 2.	
		-		Year	4	-		
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics		Major course / Elective Year 4 (see elective table)		Level II Science Elective		Level II Science Elective	
S 2	ENG 3004 Systems Engineering & Industry Practice		Major course / Elective Year 4 (see elective table)		Major course / Elective Year 4 (see elective table)		Level II Science Elective	
		_		Year	5			-
S 1	ENG 3005 Research Method & Project Management		Major course / Elective Year 4 (see elective table)		Level III Science Elective		Level III Science Elective	
S 2	ENG 4001A Research Project Part A		Major course / Elective Year 4 (see elective table)		Level III Science Elective		Level III Science Elective	
				Year	6			
S 1	ENG 4001B Research Project Part B		Major course / Elective Year 4 (see elective table)		Level III Science Elective		Level III Science Elective	

Core CourseMajor Course / Elective (see table)Double Degree Courses

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

\* If unable to take MECH ENG 1007 Engineering Mechanics – Dynamics in summer please contact <u>askecms@adelaide.edu.au</u> to discuss an alternative study plan.



### Aerospace Engineering Major

				Year	1			
S	MATHS 1011		^ENG 1001		CHEM ENG 1009		TECH 1006	
2	Mathematics IA		Introduction to Engineering		Materials I		Engineering Mechanics Technology	
				Year	2			
S	*MECH ENG 1007							
S	Engineering Mechanics – Dynamics							
S	MATHS 1012		ENG 1002		MECH ENG 2100		ELEC ENG 1101	
1	Mathematics IB		Programming (Matlab and C)		Design Practice		Electronic Systems	
S	MATHS 2107		MECH ENG 2002		MECH ENG 2019		Level I Science Elective	
2	Statistics & Numerical Methods II		Stress Analysis & Design		Dynamics & Control I			
				Year				
S	MATHS 2106		MECH ENG 2021		MECH ENG 2020		Level I Science Elective	
1	Differential Equations for Engineers II		Thermo-Fluids I		Materials & Manufacturing			
S	MECH ENG 2101		MECH ENG 3111				Level II Science Elective	
2	Mechatronics IM		Acoustics and Vibrations					
				nterns	ship			
	All Engineering students commend	ing	from 2019 are required to complete a mi	inimur	n of 8 weeks of <u>internship</u> during the cours	e of th	neir studies – see note on page 2.	
				Year	4			
S	MECH ENG 3102		MECH ENG 3100		Level II Science Elective		Level II Science Elective	
1	Heat Transfer & Thermodynamics		Aeronautical Engineering					
S	ENG 3004		MECH ENG 3101		MECH ENG 3104		Level II Science Elective	
2	Systems Engineering & Industry Practice		Applied Aerodynamics		Space Vehicle Design			
_				Year		-		-
c	ENG 3005		MECH ENG 4106	Tear	Level III Science Elective		Level III Science Elective	
1	Research Method & Project Management		Aerospace Propulsion				Level III Science Liective	
S	ENG 4001A		MECH ENG 4108		Level III Science Elective		Level III Science Elective	
2	Research Project Part A		Aircraft Design					
				Year	6			
S	ENG 4001B		Elective Year 4		Level III Science Elective		Level III Science Elective	
1	Research Project Part B		(see elective table)					

 Core Course
 Major course
 Elective (see table)
 Double Degree Courses

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

\* If unable to take MECH ENG 1007 Engineering Mechanics – Dynamics in summer please contact <u>askecms@adelaide.edu.au</u> to discuss an alternative study plan.



## Defence Systems Major

S       MATHS 1011       ^FENG 1001       CHEM ENG 4009       TECH 1006         2       Mathematics IA       Introduction to Engineering       Materials I       Engineering Mechanics Technology         S       *MECH ENG 1007       Engineering Mechanics – Dynamics       ENG 1002       MECH ENG 2100       ELEC ENG 1101.         S       MATHS 1012       ENG 1002       MECH ENG 2010       Design Practice       ELEC ENG 1101.         S       MATHS 2107       Stress Analysis & Design       Dynamics & Control I       Level I Science Elective         S       MATHS 2106       MECH ENG 2020       Dynamics & Control I       Level I Science Elective         S       MATHS 2106       MECH ENG 2021       MECH ENG 2020       Materials & Manufacturing       Level I Science Elective         1       Differential Equations for Engineers II       MECH ENG 2021       MECH ENG 2020       Level II Science Elective         2       MECH ENG 3101       Acoustics and Vibrations       MECH ENG 3101       Level II Science Elective         2       MECH ENG 3102       MECH ENG 3026       Level II Science Elective       Level II Science Elective         1       Bestander Mechanics of Materials       Level II Science Elective       Level II Science Elective         3       MECH ENG 3026       Level III Science					Year	1			
S       *MECH ENG 1007         S       Engineering Mechanics – Dynamics         S       MATHS 1012         Mathematics IB       Programming (Matlab and C)         Programming (Matlab and C)       Design Practice         S       MATHS 2107         S       MATHS 2106         Differential Equations for Engineers II       MECH ENG 2021         Thermo-Fluids I       MECH ENG 2020         Mathematics IM       MECH ENG 2021         Methematics IM       MECH ENG 3111         Acoustics and Vibrations       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         S       MECH ENG 3102         Heat Transfer & Thermodynamics       MECH ENG 3026         1       Heat Transfer & Thermodynamics         5       ENG 3004       ENG 3005         2       Systems Engineering & Industry Practice       ENG 3025         4       Elective Year 4       Level II Science Elective         5       ENG 3	S 2								
S       Engineering Mechanics – Dynamics       Image: S       Find the matics IB       ENG 1002       Design Practice       ELEC ENG 1101         S       MATHS 1012       Programming (Matilab and C)       Design Practice       ELEC ENG 1101         S       MATHS 2107       MECH ENG 2002       Stress Analysis & Design       Dynamics & Control 1       Level I Science Elective         S       MATHS 2106       MECH ENG 2021       MECH ENG 2020       Level I Science Elective       Level I Science Elective         S       MATHS 2106       MECH ENG 2021       MECH ENG 2020       Mech ENG 2020       Level I Science Elective         S       MATHS 2106       MECH ENG 2021       Thermo-Fluids I       MECH ENG 2020       Level II Science Elective         S       MATHS 2101       MECH ENG 3111       MECH ENG 3111       Level II Science Elective         2       Mecharonics IM       MECH ENG 3026       Level II Science Elective       Level II Science Elective         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.       Mech ENG 3026       Level II Science Elective         1       Heat Transfer & Thermodynamics       MECH ENG 3026       Level II Science Elective       Level II Science Elective         2       Systems Engineering &			-		Year	2			-
1       Mathematics IB       Programming (Matlab and C)       Design Practice       Electronic Systems         5       MATHS 2107       MECH ENG 2002       MECH ENG 2019       Level I Science Elective         5       Statistics & Numerical Methods II       Stress Analysis & Design       MeCH ENG 2020       Level I Science Elective         5       MATHS 2106       MECH ENG 2021       MECH ENG 2020       Level I Science Elective         5       MATHS 2106       MECH ENG 2021       Methods II       Level I Science Elective         5       MECH ENG 2101       MECH ENG 3111       Level II Science Elective       Level II Science Elective         2       Mechatronics IM       MECH ENG 3011       Acoustics and Vibrations       Level II Science Elective       Level II Science Elective         4       Recht ENG 3102       MECH ENG 3026       Level II Science Elective       Level II Science Elective         6       MECH ENG 3102       MECH ENG 3026       Level II Science Elective       Level II Science Elective         7       Heat Transfer & Thermodynamics       Method Mechanics of Materials       Level II Science Elective       Level II Science Elective         2       Systems Engineering & Industry Practice       ENG 3305       Level III Science Elective       Level III Science Elective         2 <td< td=""><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	-								
2       Statistics & Numerical Methods II       Stress Analysis & Design       Dynamics & Control I         Year 3         S       MATHS 2106       MECH ENG 2021       MECH ENG 2020       Level I Science Elective         S       MECH ENG 2101       MECH ENG 3111       Level II Science Elective       Level II Science Elective         2       Mechatronics IM       MECH ENG 3011       Acoustics and Vibrations       Level II Science Elective         Year 4         Year 4         S       MECH ENG 3102       MECH ENG 3026         Heat Transfer & Thermodynamics       MECH ENG 3026       Level II Science Elective         S       Systems Engineering & Industry Practice       ENG 3305       Elective Year 4       Level II Science Elective         S       ENG 3005       POLIS 1104       Level III Science Elective       Level III Science Elective	S 1			Programming (Matlab and C)					
S       MATHS 2106       MECH ENG 2021       MECH ENG 2020       Level I Science Elective         S       MECH ENG 2101       MECH ENG 3111       Level II Science Elective         Mechatronics IM       MECH ENG 3111       Level II Science Elective         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       MECH ENG 3102       MECH ENG 3026       Level II Science Elective         Heat Transfer & Thermodynamics       MECH ENG 3026       Level II Science Elective         S       ENG 3004       ENG 3305       ENG 3305         2       Systems Engineering & Industry Practice       ENG 3305       Elective Year 4         Year 5         S       ENG 3005       POLIS 1104       Level III Science Elective       Level III Science Elective	-							Level I Science Elective	
1       Differential Equations for Engineers II       Thermo-Fluids I       Materials & Manufacturing         2       MECH ENG 2101       MECH ENG 3111       Level II Science Elective         2       Mechatronics IM       Acoustics and Vibrations       Level II Science Elective         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         Level II Science Elective         3       MECH ENG 3102       MECH ENG 3026         4       Meterials & Internship       Level II Science Elective         4       Meterials & Internship       Level II Science Elective         5       ENG 3004       ENG 3305       Elective Year 4         2       Systems Engineering & Industry Practice       ENG 3305       Elective Year 4         Year 5         S ENG 3005       POLIS 1104					Year	· 3			
2       Mechatronics IM       Acoustics and Vibrations       Internship         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         Level II Science Elective         S       MECH ENG 3102 Heat Transfer & Thermodynamics       MECH ENG 3026 Advanced Mechanics of Materials       Level II Science Elective       Level II Science Elective         S       ENG 3004 Systems Engineering & Industry Practice       ENG 3305 Human Factors for Decision Making       Elective Year 4 (see elective table)       Level II Science Elective         Year 5         S       ENG 3005       POLIS 1104       Level III Science Elective       Level III Science Elective	Ŭ							Level I Science Elective	
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   MECH ENG 3102   Heat Transfer & Thermodynamics     MECH ENG 3004   S   Systems Engineering & Industry Practice     ENG 3305        POLIS 1104                  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. <b>Year 5</b> S ENG 3005 <b>Year 5</b>	S 2							Level II Science Elective	
Year 4         S       MECH ENG 3102       MECH ENG 3026       Level II Science Elective       Level II Science Elective         1       Heat Transfer & Thermodynamics       Advanced Mechanics of Materials       Level II Science Elective       Level II Science Elective         5       ENG 3004       ENG 3305       Elective Year 4       Level II Science Elective         2       Systems Engineering & Industry Practice       Human Factors for Decision Making       Elective Year 4       Level II Science Elective         Year 5         5       ENG 3005       POLIS 1104       Level III Science Elective       Level III Science Elective					Intern	ship			
S       MECH ENG 3102 Heat Transfer & Thermodynamics       MECH ENG 3026 Advanced Mechanics of Materials       Level II Science Elective       Level II Science Elective         S       ENG 3004 Systems Engineering & Industry Practice       ENG 3305 Human Factors for Decision Making       Elective Year 4 (see elective table)       Level II Science Elective         S       ENG 3005       POLIS 1104       Level III Science Elective       Level III Science Elective		All Engineering students comme	ncing	from 2019 are required to complete a m	inimu	m of 8 weeks of <u>internship</u> during the cours	e of th	neir studies – see note on page 2.	
3       Heat Transfer & Thermodynamics       Advanced Mechanics of Materials       Image: Constraint of Constraints       Image: Constraint of Constraints       Image: Constraint of Constraints       Image: Constraits       Image: Constraints					Year	· 4			
2       Systems Engineering & Industry Practice       Human Factors for Decision Making       (see elective table)         Vear 5         S       ENG 3005       POLIS 1104       Level III Science Elective       Level III Science Elective	-					Level II Science Elective		Level II Science Elective	
S ENG 3005 POLIS 1104 Level III Science Elective Level III Science Elective	S 2							Level II Science Elective	
			-		Year	5	-		-
	S 1	ENG 3005 Research Method & Project Management		POLIS 1104 Introduction to Comparative Politics		Level III Science Elective		Level III Science Elective	
S       ENG 4001A       ENG 4020       Level III Science Elective       Level III Science Elective         2       Research Project Part A       Complex Systems Engineering       Level III Science Elective       Level III Science Elective	-					Level III Science Elective		Level III Science Elective	
Year 6					Year	6			
S       ENG 4001B       ENG 4010       Level III Science Elective       Level III Science Elective         1       Research Project Part B       Defence Leadership       Level III Science Elective       Level III Science Elective	S 1					Level III Science Elective		Level III Science Elective	

 Core Course
 Major course
 Elective (see table)
 Double Degree Courses

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

\* If unable to take MECH ENG 1007 Engineering Mechanics – Dynamics in summer please contact <u>askecms@adelaide.edu.au</u> to discuss an alternative study plan.



# Mechanical Engineering Major

				Year	1			
S 2	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CHEM ENG 1009 Materials I		TECH 1006 Engineering Mechanics Technology	
2		-		Year		-		-
	*MECH ENG 1007			rear	2			
S S	Engineering Mechanics – Dynamics							
S	MATHS 1012		ENG 1002		MECH ENG 2100		ELEC ENG 1101	
1	Mathematics IB		Programming (Matlab and C)		Design Practice		Electronic Systems	
S	MATHS 2107		MECH ENG 2002		MECH ENG 2019		Level I Science Elective	
2	Statistics & Numerical Methods II		Stress Analysis & Design		Dynamics & Control I			
				Year				
S	MATHS 2106		MECH ENG 2021		MECH ENG 2020		Level I Science Elective	
1	Differential Equations for Engineers II		Thermo-Fluids I		Materials & Manufacturing			
S	MECH ENG 2101		MECH ENG 3111				Level II Science Elective	
2	Mechatronics IM		Acoustics and Vibrations					
				ntern	•			
	All Engineering students comme	ncing	from 2019 are required to complete a mi	nimu	m of 8 weeks of <u>internship</u> during the cour	se of tł	neir studies – see note on page 2.	
				Year	4		_	
s	MECH ENG 3102		MECH ENG 3026		Level II Science Elective		Level II Science Elective	
1	Heat Transfer & Thermodynamics		Advanced Mechanics of Materials					
S	ENG 3004		MECH ENG 3101		Elective Year 4		Level II Science Elective	
2	Systems Engineering & Industry Practice		Applied Aerodynamics		(see elective table)			
		-		Year	5	-	•	-
S	ENG 3005		MECH ENG 4111		MECH ENG 4118		Level III Science Elective	
1	Research Method & Project Management		CFD for Engineering Applications		Finite Element Analysis of Structures			
S	ENG 4001A		Level III Science Elective		Level III Science Elective		Level III Science Elective	
2	Research Project Part A			Veer				
6		-		Year		_		
S 1	ENG 4001B Research Project Part B		MECH ENG 4121 Materials Selection & Failure Analysis		Level III Science Elective		Level III Science Elective	
Ľ	Acceleration reject rate b		materials selection of failure Analysis					

 Core Course
 Major course
 Elective (see table)
 Double Degree Courses

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

\* If unable to take MECH ENG 1007 Engineering Mechanics – Dynamics in summer please contact <u>askecms@adelaide.edu.au</u> to discuss an alternative study plan.



## Mechatronics and Robotics Major

				Year	1			
S 2	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CHEM ENG 1009 Materials I		TECH 1006 Engineering Mechanics Technology	
2	Mathematics IA	-		Year		-	Engineering Meenanies reenhology	-
S S	*MECH ENG 1007 Engineering Mechanics – Dynamics							
S 1	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		MECH ENG 2100 Design Practice		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		Level I Science Elective	
				Year	3			
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2021 Thermo-Fluids I		ELEC ENG 2105 Electronic Circuits M		Level I Science Elective	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations				Level II Science Elective	
				Interns	hip			
	All Engineering students commen	ncing			hip n of 8 weeks of <u>internship</u> during the cour	se of th	eir studies – see note on page 2.	
-	All Engineering students commen	ncing			n of 8 weeks of <u>internship</u> during the cour	se of th	eir studies – see note on page 2.	
S 1	All Engineering students commen MECH ENG 3102 Heat Transfer & Thermodynamics	ncing		ninimur	n of 8 weeks of <u>internship</u> during the cour	se of th	Level II Science Elective	
	MECH ENG 3102		from 2019 are required to complete a m MECH ENG 3106	ninimur	n of 8 weeks of <u>internship</u> during the cour 4	se of th		
1	MECH ENG 3102 Heat Transfer & Thermodynamics ENG 3004	ncing	from 2019 are required to complete a m MECH ENG 3106 Mechatronics II MECH ENG 3032	ninimur	n of 8 weeks of <u>internship</u> during the cour 4 Level II Science Elective MECH ENG 4102 Advanced PID Control	se of th	Level II Science Elective	
1	MECH ENG 3102 Heat Transfer & Thermodynamics ENG 3004 Systems Engineering & Industry Practice ENG 3005 Research Method & Project Management		from 2019 are required to complete a m MECH ENG 3106 Mechatronics II MECH ENG 3032	ninimur Year	A veeks of internship during the court Level II Science Elective MECH ENG 4102 Advanced PID Control Level III Science Elective	se of th	Level II Science Elective Level II Science Elective Level III Science Elective	
1 S 2	MECH ENG 3102 Heat Transfer & Thermodynamics ENG 3004 Systems Engineering & Industry Practice ENG 3005		from 2019 are required to complete a m MECH ENG 3106 Mechatronics II MECH ENG 3032 Micro-Controller Programming MECH ENG 4124	ninimur Year	A veeks of internship during the court Level II Science Elective MECH ENG 4102 Advanced PID Control	se of th	Level II Science Elective Level II Science Elective	
1 S 2 S 1	MECH ENG 3102 Heat Transfer & Thermodynamics ENG 3004 Systems Engineering & Industry Practice ENG 3005 Research Method & Project Management ENG 4001A		from 2019 are required to complete a m MECH ENG 3106 Mechatronics II MECH ENG 3032 Micro-Controller Programming MECH ENG 4124 Robotics M Elective Year 4	ninimur Year	A veeks of internship during the court Level II Science Elective MECH ENG 4102 Advanced PID Control Level III Science Elective Level III Science Elective	se of th	Level II Science Elective Level II Science Elective Level III Science Elective	

 Core Course
 Major course
 Elective (see table)
 Double Degree Courses

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

\* If unable to take MECH ENG 1007 Engineering Mechanics – Dynamics in summer please contact <u>askecms@adelaide.edu.au</u> to discuss an alternative study plan.



## Medical Technologies Major

				Year	1			
S 2	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CHEM ENG 1009 Materials I		TECH 1006 Engineering Mechanics Technology	
		-		Year	2	-		-
S S	*MECH ENG 1007 Engineering Mechanics – Dynamics							
S 1	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		MECH ENG 2100 Design Practice		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		Level I Science Elective	
		•		Year	·3			
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2021 Thermo-Fluids I		ANAT SC 1102 Human Anatomy and Physiology IA		Level I Science Elective	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations				Level II Science Elective	
				Intern	ship			
	All Engineering students comme	ncing	from 2019 are required to complete a m	inimu	m of 8 weeks of <u>internship</u> during the cou	urse of th	neir studies – see note on page 2.	
		-		Year	4		-	-
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics		ENG 3101 Introduction to Medical Technologies		Level II Science Elective		Level II Science Elective	
S 2	ENG 3004 Systems Engineering & Industry Practice		ELEC ENG 3113 Principles of Medical Imaging		ELEC ENG 4115 Biomedical Instrumentation		Level II Science Elective	
				Year	5			
S 1	ENG 3005 Research Method & Project Management		PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems		Level III Science Elective		Level III Science Elective	
S 2	ENG 4001A Research Project Part A		MECH ENG 4101 Biomechanical Engineering		Level III Science Elective		Level III Science Elective	
				Year	6			
S 1	ENG 4001B Research Project Part B		Elective Year 4 (see elective table)		Level III Science Elective		Level III Science Elective	

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.

\* If unable to take MECH ENG 1007 Engineering Mechanics – Dynamics in summer please contact <u>askecms@adelaide.edu.au</u> to discuss an alternative study plan.



### Renewable Energy Major

				Year	1			
S 2	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CHEM ENG 1009 Materials I		TECH 1006 Engineering Mechanics Technology	
	1	-		Year	2	-		-
S S	*MECH ENG 1007 Engineering Mechanics – Dynamics							
S 1	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		MECH ENG 2100 Design Practice		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		Level I Science Elective	
				Year	3			
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2021 Thermo-Fluids I		MECH ENG 2020 Materials & Manufacturing		Level I Science Elective	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations				Level II Science Elective	
				Intern	ship			
	All Engineering students comme	ncing	from 2019 are required to complete a m	inimur	m of 8 weeks of <u>internship</u> during the cour	se of th	neir studies – see note on page 2.	
				Year	4			
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics		ENTREP 3006 Energy Management, Economics & Policy		Level II Science Elective		Level II Science Elective	
S 2	ENG 3004 Systems Engineering & Industry Practice		CHEM ENG 4048 Biofuels, Biomass and Wastes		ELEC ENG 4111 Distributed Generation Technologies		Level II Science Elective	
				Year	5			
S 1	ENG 3005 Research Method & Project Management		MECH ENG 4064 Renewable Power Technologies		Level III Science Elective		Level III Science Elective	
S 2	ENG 4001A Research Project Part A		Elective Year 4 (see elective table)		Level III Science Elective		Level III Science Elective	
				Year	6			
S 1	ENG 4001B Research Project Part B		MECH ENG 4112 Combustion Technologies & High Temperature Processes		Level III Science Elective		Level III Science Elective	

 Core Course
 Major course
 Elective (see table)
 Double Degree Courses

<sup>^</sup> Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

\* If unable to take MECH ENG 1007 Engineering Mechanics – Dynamics in summer please contact <u>askecms@adelaide.edu.au</u> to discuss an alternative study plan.



### Smart Technology Major

				Year	1			
S 2	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CHEM ENG 1009 Materials I		TECH 1006 Engineering Mechanics Technology	
				Year	2			
S S	*MECH ENG 1007 Engineering Mechanics – Dynamics							
S 1	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		MECH ENG 2100 Design Practice		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		Level I Science Elective	
				Year	3	-		-
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2021 Thermo-Fluids I		COMP SCI 1102 Object Oriented Programming		Level I Science Elective	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations				Level II Science Elective	
				Intern	ship			
	All Engineering students commen	ncing	from 2019 are required to complete a m	ninimur	n of 8 weeks of <u>internship</u> during the c	course of th	eir studies – see note on page 2.	
				Year	4			
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics		COMP SCI 2103 Algorithm Design & Data Structures		Level II Science Elective		Level II Science Elective	
S 2	ENG 3004 Systems Engineering & Industry Practice		MECH ENG 3032 Micro-Controller Programming		COMP SCI 3012 Distributed Systems		Level II Science Elective	
				Year	5			
S 1	ENG 3005 Research Method & Project Management		COMP SCI 3001 Computer Networks & Applications		Level III Science Elective		Level III Science Elective	
S 2	ENG 4001A Research Project Part A		ELEC ENG 4107 Autonomous Systems		Level III Science Elective		Level III Science Elective	
				Year	6			
S 1	ENG 4001B Research Project Part B		Elective Year 4 (see elective table)		Level III Science Elective		Level III Science Elective	

 Core Course
 Major course
 Elective (see table)
 Double Degree Courses

<sup>^</sup> Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

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## Sports Engineering Major

			Year	1			
MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CHEM ENG 1009 Materials I		TECH 1006 Engineering Mechanics Technology	
	-	-	Year	2	-		-
*MECH ENG 1007 Engineering Mechanics – Dynamics							
MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		MECH ENG 2100 Design Practice		ELEC ENG 1101 Electronic Systems	
MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		Level I Science Elective	
	-		Year	3	-		-
MATHS 2106 Differential Equations for Engineers II		MECH ENG 2021 Thermo-Fluids I		ANAT SC 1102 Human Anatomy and Physiology IA		Level I Science Elective	
MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations				Level II Science Elective	
			Intern	ship			
All Engineering students comme	ncing	from 2019 are required to complete a n	ninimur	m of 8 weeks of <u>internship</u> during the cou	urse of th	neir studies – see note on page 2.	
			Year	4			
MECH ENG 3102 Heat Transfer & Thermodynamics		MECH ENG 3026 Advanced Mechanics of Materials		Level II Science Elective		Level II Science Elective	
ENG 3004 Systems Engineering & Industry Practice		MECH ENG 3101 Applied Aerodynamics		Elective Year 4 (see elective table)		Level II Science Elective	
			Year	5			
ENG 3005 Research Method & Project Management		MECH ENG 3112 Sports Engineering		Level III Science Elective		Level III Science Elective	
ENG 4001A Research Project Part A		MECH ENG 4101 Biomechanical Engineering		Level III Science Elective		Level III Science Elective	
			Year	6			
ENG 4001B Research Project Part B		MECH ENG 4104 Advanced Topics in Fluid Mechanics		Level III Science Elective		Level III Science Elective	
	Mathematics IA *MECH ENG 1007 Engineering Mechanics – Dynamics MATHS 1012 Mathematics IB MATHS 2107 Statistics & Numerical Methods II MATHS 2106 Differential Equations for Engineers II MECH ENG 2101 Mechatronics IM All Engineering students comme All Engineering students comme ENG 3004 Systems Engineering & Industry Practice ENG 3005 Research Method & Project Management ENG 4001A Research Project Part A	Mathematics IA   *MECH ENG 1007   Engineering Mechanics – Dynamics   MATHS 1012   Mathematics IB   MATHS 2107   Statistics & Numerical Methods II   MATHS 2106   Differential Equations for Engineers II   MECH ENG 2101   Mechatronics IM   All Engineering students commencing   MECH ENG 3102   Heat Transfer & Thermodynamics   ENG 3004   Systems Engineering & Industry Practice   ENG 3005   Research Method & Project Management   ENG 4001A   ENG 4001B	Mathematics IA       Introduction to Engineering         *MECH ENG 1007       Engineering Mechanics – Dynamics       ENG 1002         MATHS 1012       Programming (Matlab and C)         MATHS 2107       MECH ENG 2002         Statistics & Numerical Methods II       Stress Analysis & Design         MATHS 2106       MECH ENG 2021         Differential Equations for Engineers II       MECH ENG 2021         MECH ENG 2101       MECH ENG 3111         Mechatronics IM       MECH ENG 3111         All Engineering students commencing from 2019 are required to complete a	MATHS 1011       ^FENG 1001         Mathematics IA       Introduction to Engineering         *MECH ENG 1007       Programming (Matlab and C)         MATHS 1012       ENG 1002         MATHS 2107       MECH ENG 2002         Statistics & Numerical Methods II       MECH ENG 2002         MATHS 2106       MECH ENG 2021         Differential Equations for Engineers II       MECH ENG 3111         MECH ENG 2101       MECH ENG 3111         Mech Eng 3102       Intermo-Fluids I         MECH ENG 3102       MECH ENG 3026         Heat Transfer & Thermodynamics       MECH ENG 3101         ENG 3004       MECH ENG 3111         Systems Engineering & Industry Practice       MECH ENG 3112         ENG 3005       MECH ENG 3112         Research Method & Project Management       Sports Engineering         ENG 4001A       MECH ENG 4101         Research Project Part A       MECH ENG 4104	Mathematics IA       Introduction to Engineering       Materials I         *MECH ENG 1007       Engineering Mechanics – Dynamics       ENG 1002       MECH ENG 2100         MATHS 1012       ENG 1002       MECH ENG 2100       Design Practice         MATHS 2107       MECH ENG 2002       MECH ENG 2019       Dynamics & Control I         Statistics & Numerical Methods II       MECH ENG 2021       MECH ENG 2021       MATHS 2106         Differential Equations for Engineers II       MECH ENG 3011       ANATS C 1102       Human Anatomy and Physiology IA         MECH ENG 2101       MECH ENG 3111       Human Anatomy and Physiology IA       Human Anatomy and Physiology IA         MECH ENG 3102       MECH ENG 3026       Level III Science Elective       Vear 4         MECH ENG 3004       MECH ENG 3101       Elective Year 4       (see elective table)         System Engineering & Industry Practice       MECH ENG 3102       Elective Year 4       (see elective table)         FNG 3005       MECH ENG 3112       Sports Engineering       Level III Science Elective         Research Method & Project Management       Sports Engineering       Level III Science Elective         Research Project Part A       MECH ENG 4101       Level III Science Elective         Research Project Part A       Biomechanical Engineering       Level III Science E	MATHS 1011       ^FENG 1001       CHEM ENG 1009         Materials I       Vear 2         *MECH ENG 1007       Engineering Mechanics – Dynamics       MECH ENG 1007         Engineering Mechanics – Dynamics       ENG 1002       MECH ENG 2100       Design Practice         MATHS 1012       ENG 1002       MECH ENG 200       Design Practice       MECH ENG 2019         MATHS 2107       Statistics & Numerical Methods II       Stress Analysis & Design       Dynamics & Control I       Differential Equations for Engineers II       MECH ENG 2021       ANAT SC 1102       Human Anatomy and Physiology IA       Mech ENG 2101         MECH ENG 2101       MECH ENG 3111       Acoustics and Vibrations       Mech ENG 3111       Coustics and Vibrations       Mech ENG 3111         MECH ENG 3102       MECH ENG 3026       MECH ENG 3026       Level II Science Elective       Mech ENG 3101         Heat Transfer & Thermodynamics       MECH ENG 3101       Elective Year 4       See elective table)       Set Solos         ENG 3004       Systems Engineering & Industry Practice       MECH ENG 3112       Level III Science Elective       Elective Year 4         Systems Engineering & Industry Practice       MECH ENG 3101       Elective Year 4       See elective table)       Set Solos         Research Method & Project Management       Sports Engineering	MATHS 1011       ^FENG 1001       CHEM ENG 1009       TECH 1006         Mathematics IA       Watchals I       CHEM ENG 1009       TECH 1006         FMECH ENG 1007       Engineering Mechanics – Dynamics       FMECH ENG 1002       FMECH ENG 2100       ELEC ENG 1101         MATHS 2107       ENG 1002       Programming (Matlab and C)       MECH ENG 2109       ELEC ENG 1101       Electronic Systems         MATHS 2107       MECH ENG 2002       MECH ENG 2019       Level I Science Elective       Stress Analysis & Design       Dynamics & Control I       Electronic Systems         MATHS 2106       MECH ENG 2021       MECH ENG 2021       ANAT SC 1102       Level I Science Elective         Differential Equations for Engineers II       MECH ENG 3021       ANAT SC 1102       Level I Science Elective         MATHS 2106       MECH ENG 3021       ANAT SC 1102       Level I Science Elective         MECH ENG 3101       Acoustics and Vibrations       Internship       Level II Science Elective         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         MECH ENG 3102       MECH ENG 3101       Elective Year 4       Level II Science Elective         MECH ENG 3102       MECH ENG 3101       Elective Stale       Level III Science Electi

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### Mechanical Engineering Electives

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

		Yea	ar 2		
<b>S1</b>	MECH ENG 2020	Materials & Manufacturing			
		Yea	ar 3		
<b>S1</b>	MECH ENG 3026 MECH ENG 3100 MECH ENG 3103 MECH ENG 3106 MECH ENG 3112	Advanced Mechanics of Materials Aeronautical Engineering Advanced Manufacturing Systems Mechatronics II Sports Engineering	<b>S2</b>	MECH ENG 3032 MECH ENG 3101 MECH ENG 3104 ELEC ENG 2106 ELEC ENG 3112 ENG 3305 ENTREP 3900	Micro-Controller Programming Applied Aerodynamics Space Vehicle Design Vector Calculus & Electromagnetics Electric Drive Systems M Human Factors for Decision Making eChallenge
WIN	PROJMGNT 3030	Project Logistics and Supply Chains			
		Yea	ar 4		
<b>S</b> 1	MECH ENG 4064 MECH ENG 4080 MECH ENG 4104 MECH ENG 4106 MECH ENG 4111 MECH ENG 4112 MECH ENG 4118 MECH ENG 4121 MECH ENG 4124	Renewable Power Technologies Modern Control Systems Advanced Topics in Fluid Mechanics Aerospace Propulsion CFD for Engineering Applications Combustion Technologies & High Temperature Processes Finite Element Analysis of Structures Materials Selection & Failure Analysis Robotics M	<b>S2</b>	MECH ENG 4100 MECH ENG 4101 MECH ENG 4102 MECH ENG 4105 MECH ENG 4107 MECH ENG 4108 <del>MECH ENG 4123</del> ENG 3201 ENG 4020	Advanced Topics in Aerospace Engineering Biomechanical Engineering Advanced PID Control Advanced Vibrations Air conditioning Aircraft Design <del>Advanced Digital Control</del> ( <i>not running in 2022</i> ) Essentials of Humanitarian Practice Complex Systems Engineering
SUM	MECH ENG 4115 MECH ENG 4126	Engineering Acoustics Topics in Welded Structures		1	