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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>.

#### **General Electives**

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

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

#### **Program Rules**

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

#### **Information and Enrolment Advice**

Ask ECMS

Email: askecms@adelaide.edu.au

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



No Major

			Yea	ar 1	1		,	
S 1	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CEME 1004 Engineering Mechanics-Statics		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		CHEM ENG 1009 Materials I		MECH ENG 1007 Engineering Mechanics – Dynamics	
			Ye	ar 2	2			
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2100 Design Practice		MECH ENG 2021 Thermo-Fluids I		ACCTING 1002 Introductory Accounting I	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		ECON 1009 International Financial Institutions & Markets I	
	Year 3							
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics		Major course / Elective Year 2 (see elective table)		CORPFIN 1002 Business Finance I		ECON 1012 Principles of Economics I	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations		Major course / Elective Year 3 (see elective table)		CORPFIN 2502 Business Valuation II	
			Inter	rnsł	hip			
	All Engineering students commend	ing	from 2019 are required to complete a minim	ıum	of 8 weeks of internship during the course	of th	eir studies – see note on page 2.	
			Ye	ar 4	1			
S 1	ENG 3004 Systems Engineering & Industry Practice		Major course / Elective Year 4 (see elective table)		ECON 2508 Financial Economics II		CORPFIN 2504 Options, Futures & Risk Management	
S 2	ENG 3005 Research Method & Project Management		Major course / Elective Year 4 (see elective table)		CORPFIN 2501 Financial Institutions Management II		MATHS 3012 Financial Modelling: Tools & Techniques III	
			Yea	ar 5	5			
S 1	ENG 4001A Research Project Part A		Major course / Elective Year 4 (see elective table)		Major course / Elective Year 4 (see elective table)		ECON 3511 Money, Banking and Financial Markets III	
S 2	ENG 4001B Research Project Part B		Major course / Elective Year 4 (see elective table)		CORPFIN 3501 Portfolio Theory & Management III		Finance and Banking Elective (see elective table)	
Cor	e Course Major Course / Elective (see	tab	le) Double Degree Courses / Elective (see	tak	ole)			

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



Major course

## 2022 Study Plan Bachelor of Engineering (Honours) (Mechanical) with Bachelor of Finance and Banking — Semester 1 Start

Aerospace Engineering Major

			Yea	ır 1	1			
S 1	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering	7 I	CEME 1004 Engineering Mechanics-Statics		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)	11	CHEM ENG 1009 Materials I		MECH ENG 1007 Engineering Mechanics – Dynamics	
			Yea	ır 2	2			
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2100 Design Practice		MECH ENG 2021 Thermo-Fluids I		ACCTING 1002 Introductory Accounting I	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design	_	MECH ENG 2019 Dynamics & Control I		ECON 1009 International Financial Institutions & Markets I	
	Year 3							
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics		MECH ENG 2020 Materials & Manufacturing	7 I	CORPFIN 1002 Business Finance I		ECON 1012 Principles of Economics I	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations		MECH ENG 3104 Space Vehicle Design		CORPFIN 2502 Business Valuation II	
			Intern	nsh	hip			
	All Engineering students commend	ing	from 2019 are required to complete a minimu	ım	of 8 weeks of <u>internship</u> during the course	of th	neir studies – see note on page 2.	
			Yea	ır 4	4			
S 1	ENG 3004 Systems Engineering & Industry Practice		MECH ENG 3100 Aeronautical Engineering	7 I	ECON 2508 Financial Economics II		CORPFIN 2504 Options, Futures & Risk Management	
S 2	ENG 3005 Research Method & Project Management		MECH ENG 3101 Applied Aerodynamics	_	CORPFIN 2501 Financial Institutions Management II		MATHS 3012 Financial Modelling: Tools & Techniques III	
			Year	ır 5	5			
S 1	ENG 4001A Research Project Part A		MECH ENG 4106 Aerospace Propulsion	_	Elective Year 4 (see elective table)		ECON 3511 Money, Banking and Financial Markets III	
S 2	ENG 4001B Research Project Part B		MECH ENG 4108 Aircraft Design	7	CORPFIN 3501 Portfolio Theory & Management III		Finance and Banking Elective (see elective table)	

Elective (see table)

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



Defence Systems Major

				Year	1		·	Š
S 1	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CEME 1004 Engineering Mechanics-Statics		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		CHEM ENG 1009 Materials I		MECH ENG 1007 Engineering Mechanics – Dynamics	
			,	Year	2			
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2100 Design Practice		MECH ENG 2021 Thermo-Fluids I		ACCTING 1002 Introductory Accounting I	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		ECON 1009 International Financial Institutions & Markets I	
			,	Year	3			
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics		MECH ENG 2020 Materials & Manufacturing		CORPFIN 1002 Business Finance I		ECON 1012 Principles of Economics I	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations		ENG 3305 Human Factors for Decision Making		CORPFIN 2502 Business Valuation II	
			Int	terns	hip			
	All Engineering students commen	ncing	from 2019 are required to complete a min	imun	n of 8 weeks of internship during the course	of th	eir studies – see note on page 2.	
				Year	4			
S 1	ENG 3004 Systems Engineering & Industry Practice		MECH ENG 3026 Advanced Mechanics of Materials		ECON 2508 Financial Economics II		CORPFIN 2504 Options, Futures & Risk Management	
S 2	ENG 3005 Research Method & Project Management		Elective Year 4 (see elective table)		CORPFIN 2501 Financial Institutions Management II		MATHS 3012 Financial Modelling: Tools & Techniques III	
			,	Year	5			
S 1	ENG 4001A Research Project Part A		POLIS 1104 Introduction to Comparative Politics		ENG 4010 Defence Leadership		ECON 3511 Money, Banking and Financial Markets III	; 🔲
S 2	ENG 4001B Research Project Part B		ENG 4020 Complex Systems Engineering		CORPFIN 3501 Portfolio Theory & Management III		Finance and Banking Elective (see elective table)	

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

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



Major course

## 2022 Study Plan Bachelor of Engineering (Honours) (Mechanical) with Bachelor of Finance and Banking — Semester 1 Start

Mechanical Engineering Major

		•	Year	1			
S 1	MATHS 1011 Mathematics IA	^ENG 1001 Introduction to Engineering		CEME 1004 Engineering Mechanics-Statics		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 1012 Mathematics IB	ENG 1002 Programming (Matlab and C)		CHEM ENG 1009 Materials I		MECH ENG 1007 Engineering Mechanics – Dynamics	
		,	Year	2			
S 1	MATHS 2106 Differential Equations for Engineers II	MECH ENG 2100 Design Practice		MECH ENG 2021 Thermo-Fluids I		ACCTING 1002 Introductory Accounting I	
S 2	MATHS 2107 Statistics & Numerical Methods II	MECH ENG 2002  Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		ECON 1009 International Financial Institutions & Markets I	
		,	Year	3			
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics	MECH ENG 2020 Materials & Manufacturing		CORPFIN 1002 Business Finance I		ECON 1012 Principles of Economics I	
S 2	MECH ENG 2101 Mechatronics IM	MECH ENG 3111 Acoustics and Vibrations		CORPFIN 2504 Options, Futures & Risk Management		CORPFIN 2502 Business Valuation II	
		Int	terns	hip			
	All Engineering students commencin	g from 2019 are required to complete a min	imun	n of 8 weeks of <u>internship</u> during the course	of th	neir studies – see note on page 2.	
			Year	4			
S 1	ENG 3004 Systems Engineering & Industry Practice	MECH ENG 3026 Advanced Mechanics of Materials		MECH ENG 4111 CFD for Engineering Applications		ECON 2508 Financial Economics II	
S 2	ENG 3005 Research Method & Project Management	MECH ENG 3101 Applied Aerodynamics		CORPFIN 2501 Financial Institutions Management II		MATHS 3012 Financial Modelling: Tools & Techniques III	
		,	Year	5			
S 1	ENG 4001A Research Project Part A	MECH ENG 4118 Finite Element Analysis of Structures		MECH ENG 4121 Materials Selection & Failure Analysis		ECON 3511 Money, Banking and Financial Markets III	
S 2	ENG 4001B Research Project Part B	Elective Year 4 (see elective table)		CORPFIN 3501 Portfolio Theory & Management III		Finance and Banking Elective (see elective table)	

Elective (see table)

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



Major course

### 2022 Study Plan Bachelor of Engineering (Honours) (Mechanical) with Bachelor of Finance and Banking — Semester 1 Start

# Mechatronics and Robotics Major

MATH'S 1011   Mathematics IA   Mathematics IA   Mathematics IA   Mathematics IA   Mathematics IB   Mathema			<u> </u>	<b>⁄</b> ear	1			
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**  **Year 4**  **NaTHS 2106**  **MATHS 2107**  **MATHS 2107**  **Statistics & Numerical Methods II**  **MECH ENG 2002**  **MECH ENG 2002**  **MECH ENG 2019*  **Dynamics & Control I**  **MECH ENG 2019*  **Dynamics & Control I**  **MECH ENG 2019*  **Dynamics & Control I**  **Markets I**  **Wear 3**  **MECH ENG 3102**  **Heat Transfer & Thermodynamics**  **ELEC ENG 2105**  **Electronic Circuits M**  **Business Finance I**  **MECH ENG 3002**  **MECH ENG 3101**  **MeCH ENG 3101**  **MeCH ENG 3101**  **MeCH ENG 3101**  **MeCH ENG 3032**  **Micro-Controller Programming**  **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**  **Year 4**  **Year 4**  **Year 4**  **Year 4**  **Year 4**  **Nech ENG 3005**  **Research Method & Project Management**  **MECH ENG 3106**  **MECH ENG 3106**  **MECH ENG 3106**  **Mech ENG 3005**  **Research Method & Project Management**  **MECH ENG 4102**  **Advanced PID Control**  **MECH ENG 4102**  **Advanced PID Control**  **MECH ENG 4001A**  **Research Project Part A**  **MECH ENG 4001A**  **Research Project Part A**  **MECH ENG 4104**  **Mech ENG 4001A**  **Mech ENG 4001A**  **Research Project Part A**  **MECH ENG 4104**  **Mech ENG 3005**  **MECH ENG 4001A**  **Mech ENG 3001*  **Mech ENG 3002*  **Mech ENG	S 1		¬ I					
MATHS 2106								
1 Differential Equations for Engineers II			١	<b>⁄</b> ear	2			
Statistics & Numerical Methods II	S 1		1 1					
S   MECH ENG 3102   Heat Transfer & Thermodynamics   Elec ENG 2105   Electronic Circuits M   Business Finance			_				International Financial Institutions &	
Heat Transfer & Thermodynamics			Y	<b>⁄</b> ear	3			
Acoustics and Vibrations   Micro-Controller Programming   Business Valuation II      Internship	S 1							
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 ENG 3004 Systems Engineering & Industry Practice  BY Systems Engineering & Industry Practice  MECH ENG 3106 Mechatronics II  S ENG 3005 Research Method & Project Management  MECH ENG 4102 Advanced PID Control  MECH ENG 4102 Financial Institutions Management II  MECH ENG 4102 Financial Institutions Management II  S ENG 4001A Research Project Part A  MECH ENG 4124 Robotics M  MECH ENG 4080 Modern Control Systems  MECH ENG 4080 Modern Control Systems  Elective Year 4  CORPFIN 2501 Financial Institutions Management II  MECH ENG 4080 Modern Control Systems  Finance and Banking Elective	_							
S ENG 3004   Systems Engineering & Industry Practice   MECH ENG 3106   Mechatronics II   ECON 2508   Financial Economics II   Options, Futures & Risk Management   S ENG 3005   Research Method & Project Management   Advanced PID Control   Financial Institutions Management II   MECH ENG 4102   Financial Institutions Management II   Financial Modelling: Tools & Techniques III			Int	erns	hip			
S ENG 3004 Systems Engineering & Industry Practice		All Engineering students commencing	ng from 2019 are required to complete a mini	imun	n of 8 weeks of <u>internship</u> during the course	of th	neir studies – see note on page 2.	
Systems Engineering & Industry Practice			١	<b>⁄</b> ear	4			
Research Method & Project Management Advanced PID Control Financial Institutions Management II Financial Modelling: Tools & Techniques III  S ENG 4001A Research Project Part A MECH ENG 4124 Robotics M Modern Control Systems Money, Banking and Financial Markets III  S ENG 4001B Elective Year 4 CORPFIN 3501 Finance and Banking Elective	S 1		<b>기  </b>					
S ENG 4001A Research Project Part A  MECH ENG 4124 Robotics M  MECH ENG 4080 Modern Control Systems  Money, Banking and Financial Markets III  S ENG 4001B  CORPFIN 3501  Finance and Banking Elective			_				Financial Modelling: Tools &	
Research Project Part A Robotics M Modern Control Systems Money, Banking and Financial Markets  S ENG 4001B CORPFIN 3501 Finance and Banking Elective			Y	<b>⁄</b> ear	5			
	_							
	S 2						_	

Elective (see table)

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



Medical Technologies Major

				Year	1			
S 1	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CEME 1004 Engineering Mechanics-Statics		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		CHEM ENG 1009 Materials I		MECH ENG 1007 Engineering Mechanics – Dynamics	
				Year	2			
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2100 Design Practice		MECH ENG 2021 Thermo-Fluids I		ACCTING 1002 Introductory Accounting I	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		ECON 1009 International Financial Institutions & Markets I	
				Year	3			
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics		ANAT SC 1102 Human Anatomy and Physiology IA		CORPFIN 1002 Business Finance I		ECON 1012 Principles of Economics I	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations		ELEC ENG 3113 Principles of Medical Imaging		CORPFIN 2502 Business Valuation II	
			lı	nterns	ship			
	All Engineering students comme	ncing	from 2019 are required to complete a mi	nimur	n of 8 weeks of <u>internship</u> during the course	of th	neir studies – see note on page 2.	
				Year	4			
S 1	ENG 3004 Systems Engineering & Industry Practice		ENG 3101 Introduction to Medical Technologies		ECON 2508 Financial Economics II		CORPFIN 2504 Options, Futures & Risk Management	
S 2	ENG 3005 Research Method & Project Management		ELEC ENG 4115 Biomedical Instrumentation		CORPFIN 2501 Financial Institutions Management II		MATHS 3012 Financial Modelling: Tools & Techniques III	
				Year	5			
S 1	ENG 4001A Research Project Part A		PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems		Elective Year 4 (see elective table)		ECON 3511 Money, Banking and Financial Markets III	
S 2	ENG 4001B Research Project Part B		MECH ENG 4101 Biomechanical Engineering		CORPFIN 3501 Portfolio Theory & Management III		Finance and Banking Elective (see elective table)	

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

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



Major course

### 2022 Study Plan Bachelor of Engineering (Honours) (Mechanical) with Bachelor of Finance and Banking — Semester 1 Start

Renewable Energy Major

				Year	1			
S 1	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CEME 1004 Engineering Mechanics-Statics		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		CHEM ENG 1009 Materials I		MECH ENG 1007 Engineering Mechanics – Dynamics	
				Year	2			
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2100 Design Practice		MECH ENG 2021 Thermo-Fluids I		ACCTING 1002 Introductory Accounting I	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		ECON 1009 International Financial Institutions & Markets I	
				Year	3			
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics		MECH ENG 2020 Materials & Manufacturing		CORPFIN 1002 Business Finance I		ECON 1012 Principles of Economics I	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations		ELEC ENG 4111 Distributed Generation Technologies		CORPFIN 2502 Business Valuation II	
			<u>lı</u>	nterns	hip			
	All Engineering students commer	ncing	from 2019 are required to complete a mi	nimun	n of 8 weeks of <u>internship</u> during the course	of th	eir studies – see note on page 2.	
				Year	4			
S 1	ENG 3004 Systems Engineering & Industry Practice		ENTREP 3006 Energy Management, Economics & Policy		ECON 2508 Financial Economics II		CORPFIN 2504 Options, Futures & Risk Management	
S 2	ENG 3005 Research Method & Project Management		CHEM ENG 4048 Biofuels, Biomass and Wastes		CORPFIN 2501 Financial Institutions Management II		MATHS 3012 Financial Modelling: Tools & Techniques III	
				Year	5			
S 1	ENG 4001A Research Project Part A		MECH ENG 4064 Renewable Power Technologies		MECH ENG 4112 Combustion Technologies & High Temperature Processes		ECON 3511 Money, Banking and Financial Markets III	
S 2	ENG 4001B Research Project Part B		Elective Year 4 (see elective table)		CORPFIN 3501 Portfolio Theory & Management III		Finance and Banking Elective (see elective table)	

Elective (see table)

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



Major course

### 2022 Study Plan Bachelor of Engineering (Honours) (Mechanical) with Bachelor of Finance and Banking — Semester 1 Start

Smart Technologies Major

				Year	1			
S 1	MATHS 1011 Mathematics IA		^ENG 1001 Introduction to Engineering		CEME 1004 Engineering Mechanics-Statics		ELEC ENG 1101 Electronic Systems	
S 2	MATHS 1012 Mathematics IB		ENG 1002 Programming (Matlab and C)		CHEM ENG 1009 Materials I		MECH ENG 1007 Engineering Mechanics – Dynamics	
				Year	2			
S 1	MATHS 2106 Differential Equations for Engineers II		MECH ENG 2100 Design Practice		MECH ENG 2021 Thermo-Fluids I		ACCTING 1002 Introductory Accounting I	
S 2	MATHS 2107 Statistics & Numerical Methods II		MECH ENG 2002 Stress Analysis & Design		MECH ENG 2019 Dynamics & Control I		ECON 1009 International Financial Institutions & Markets I	
				Year	3			
S 1	MECH ENG 3102 Heat Transfer & Thermodynamics		COMP SCI 1102 Object Oriented Programming		CORPFIN 1002 Business Finance I		ECON 1012 Principles of Economics I	
S 2	MECH ENG 2101 Mechatronics IM		MECH ENG 3111 Acoustics and Vibrations		COMP SCI 2103 Algorithm Design & Data Structures		CORPFIN 2502 Business Valuation II	
			lr	nterns	hip			
	All Engineering students comme	ncing	from 2019 are required to complete a min	nimun	n of 8 weeks of <u>internship</u> during the course	of th	neir studies – see note on page 2.	
				Year	4			
S 1	ENG 3004 Systems Engineering & Industry Practice		COMP SCI 3001 Computer Networks & Applications		ECON 2508 Financial Economics II		CORPFIN 2504 Options, Futures & Risk Management	
S 2	ENG 3005 Research Method & Project Management		MECH ENG 3032 Micro-Controller Programming		CORPFIN 2501 Financial Institutions Management II		MATHS 3012 Financial Modelling: Tools & Techniques III	
				Year	5			
S 1	ENG 4001A Research Project Part A		Elective Year 4 (see elective table)		Finance and Banking Elective (see elective table)		ECON 3511 Money, Banking and Financial Markets III	
S 2	ENG 4001B Research Project Part B		ELEC ENG 4107 Autonomous Systems		COMP SCI 3012 Distributed Systems		CORPFIN 3501 Portfolio Theory & Management III	

Elective (see table)

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



Major course

## 2022 Study Plan Bachelor of Engineering (Honours) (Mechanical) with Bachelor of Finance and Banking — Semester 1 Start

**Sports Engineering Major** 

S MATHS 1011		ELEC ENG 1101 Electronic Systems  MECH ENG 1007 Engineering Mechanics – Dynamics	
Mathematics IA   Introduction to Engineering   Engineering Mechanics-Statics		Electronic Systems  MECH ENG 1007	
Materials I  Programming (Matlab and C)  Year 2  S MATHS 2106 Differential Equations for Engineers II  MECH ENG 2100 Design Practice  MECH ENG 2002 Stress Analysis & Design  MECH ENG 2019 Dynamics & Control I  MECH ENG 3102 Heat Transfer & Thermodynamics  MECH ENG 3111 Acoustics and Vibrations  MECH ENG 3101 Applied Aerodynamics  MECH ENG 3101 Applied Aerodynamics			
S MATHS 2106 Differential Equations for Engineers II  S MATHS 2107 Statistics & Numerical Methods II  S MECH ENG 2002 Stress Analysis & Design  S MECH ENG 2019 Dynamics & Control I  S MECH ENG 3102 Heat Transfer & Thermodynamics  MECH ENG 3111 Acoustics and Vibrations  MECH ENG 2101 MECH ENG 2021 Thermo-Fluids I  MECH ENG 2019 Dynamics & Control I  MECH ENG 2019 Dynamics & Control I  MECH ENG 3102 Business Finance I  MECH ENG 3101 Applied Aerodynamics			
Design Practice  MATHS 2107 Statistics & Numerical Methods II  MECH ENG 2002 Stress Analysis & Design  MECH ENG 2019 Dynamics & Control I  MECH ENG 3102 Heat Transfer & Thermodynamics  MECH ENG 3111 Mechatronics IM  MECH ENG 3101 Acoustics and Vibrations  MECH ENG 3101 Applied Aerodynamics			
Stress Analysis & Design  Dynamics & Control I  Stress Analysis & Design  Dynamics & Control I  Stress Analysis & Design  Dynamics & Control I  Year 3  MECH ENG 3102 Heat Transfer & Thermodynamics  MECH ENG 3111 Mechatronics IM  MECH ENG 3111 Acoustics and Vibrations  Dynamics & Control I  CORPFIN 1002 Business Finance I  MECH ENG 3101 Applied Aerodynamics		ACCTING 1002 Introductory Accounting I	
S MECH ENG 3102 Heat Transfer & Thermodynamics  S MECH ENG 2101 Mechatronics IM  ANAT SC 1102 Human Anatomy and Physiology IA  ANAT SC 1102 Human Anatomy and Physiology IA  Business Finance I  MECH ENG 3101 Acoustics and Vibrations  MECH ENG 3101 Applied Aerodynamics		ECON 1009 International Financial Institutions & Markets I	
Heat Transfer & Thermodynamics Human Anatomy and Physiology IA Business Finance I  MECH ENG 2101 Mechatronics IM MECH ENG 3111 Acoustics and Vibrations MECH ENG 3101 Applied Aerodynamics			
2 Mechatronics IM Acoustics and Vibrations Applied Aerodynamics		ECON 1012 Principles of Economics I	
Internship		CORPFIN 2502 Business Valuation II	
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the co	ourse of tl	heir studies – see note on page 2.	
Year 4			
S 1 ENG 3004 Systems Engineering & Industry Practice		CORPFIN 2504 Options, Futures & Risk Management	
S 2 ENG 3005 Research Method & Project Management		MATHS 3012 Financial Modelling: Tools & Techniques III	
Year 5			
S 1 ENG 4001A Research Project Part A MECH ENG 3112 MECH ENG 3112 MECH ENG 4104 Advanced Topics in Fluid Mechanics		ECON 3511  Money, Banking and Financial Markets III	
S ENG 4001B Research Project Part B Elective Year 4 (see elective table) CORPFIN 3501 Portfolio Theory & Management III		Finance and Banking Elective (see elective table)	

Elective (see table)

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



Electives

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

	Mechanical Engineering Electives Year 2										
<b>S1</b>	MECH ENG 2020	Materials & Manufacturing									
	Mechanical Engineering Electives Year 3										
S1	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									
	Mechanical Engineering Electives Year 4										
\$1	MECH ENG 4064 MECH ENG 4080 MECH ENG 4104 MECH ENG 4110 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 MECH ENG 4123 ENG 3201 ENG 4020	Advanced Topics in Aerospace Engineering Biomechanical Engineering Advanced PID Control Advanced Vibrations Air conditioning Aircraft Design Advanced Digital Control (not running in 2022) Essentials of Humanitarian Practice Complex Systems Engineering						
SUM	MECH ENG 4115 MECH ENG 4126	Engineering Acoustics Topics in Welded Structures									
	ECON 3506	CHOOSE FROM THE FOLLOWING	FIN/	ANCE & BANKING EI	International Finance III						
<b>S1</b>	CORPFIN 3507	Topics in Corporate Finance	<b>S2</b>	CORPFIN 3505 CORPFIN 3506	Corporate Regulations & Ethics in Finance Takeovers, Corporate Restructuring & Governance						