# 2023 Study Plan (Semester 1 Start)





Program Notes	2
No Major	3
Computer Engineering Major	7
Cybersecurity Major	
Defence Systems Major	. 11
Biomedical Engineering	. 13
Renewable Energy Major	. 14
Smart Technologies Major	. 16
Communications Systems Major	5

## 2023 Study Plan (Semester 1 Start)

Bachelor of Engineering (Honours) (Electrical & Electronic) with a Bachelor of Mathematical and Computer Sciences – Computer Science



### **Program Notes**

#### **Degree Information**

Students must ensure they are correctly enrolled in accordance with Academic Program Rules of their degree. Please note program rules are subject to change.

- ^EAL: Unless exempted, International students are required to take ENG 1011 Introduction to Engineering EAL in lieu of ENG 1001 Introduction to Engineering.
- # COMP SCI Electives may be chosen from the courses listed in the Program Rules for the Bachelor of Mathematics and Computer Sciences: https://calendar.adelaide.edu.au/faculty/set

#### **Flectives**

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

#### 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://set.adelaide.edu.au/student-support/internships">https://set.adelaide.edu.au/student-support/internships</a>

#### Course Planner

The <u>Course Planner</u> website can be used to find information about any University course, including semester/trimester/term availability, class times, unit value, restrictions and prerequisites.

#### **Enrolment Errors**

Please submit the <u>relevant form</u> to request a unit-overload waiver, prerequisite waiver, timetable clash resolution or a course/class full request.

#### **Study Overseas**

A Study Overseas experience may be incorporated into your program. To find opportunities available in your study area click <u>Study Overseas</u>.

#### **Critical Dates**

For important dates and deadlines regarding enrolment and fees, please see the critical dates website.

#### **Further Information & Enrolment Advice**

Phone: +61 8 8313 4148 Email: askset@adelaide.edu.au

Website: https://set.adelaide.edu.au/student-support

In person: Level 1, Ingkarni Wardli Building, Nth Tce Campus, Kaurna

Country, Adelaide SA 5005

# 2023 Study Plan (Semester 1 Start)

**Bachelor of Engineering (Honours) (Electrical & Electronic)** 

with a Bachelor of Mathematical and Computer Sciences



### No Major

					NO Major
			Ye	ear 1	
S1	^ENG 1001 Introduction to En	gineering	ELEC ENG 1100 Analog Electronics	ENG 1002 Programming (Matlab and C)	MATHS 1011 Mathematics IA
S2	PHYSICS 1510 Physics 1E: Mech Thermodynamics		ELEC ENG 1102 Digital Electronics	COMP SCI 1102 Object Orientated Programming	MATHS 1012 Mathematics IB
			Ye	ear 2	
S1	ELEC ENG 2017 Circuits and Syste	ems	ELEC ENG 2101 Electronics	ELEC ENG 2102 Electric Energy Conversion	MATHS 2106 Differential Equations for Engineers II
S2	ELEC ENG 2100 Digital Systems		ELEC ENG 2104 Digital Signal Processing	ELEC ENG 2106 Vector Calculus & Electromagnetics	MATHS 2107 Statistics & Numerical Methods II
			Ye	ear 3	
S1	ELEC ENG 3103 Engineering Elect	romagnetics	ELEC ENG 3101 Control	COMP SCI 2103 Algorithm Design & Data Structures	COMP SCI 2000 Computer Systems
S2	ELEC ENG 3104 Electric Drive Sys	tems	ELEC ENG 3110 Electric Power Systems	COMP SCI 2201 Algorithm & Data Structure Analysis	# Level II or III Comp Sci Elective
			Inte	rnship	
All E	ngineering students	commencing from		minimum of 8 weeks of internship during m Notes.	the course of their studies – see the
			Ye	ear 4	
S1	ENG 3004 Systems Enginee Practice	ring & Industry	E&E Engineering Elective (see elective table)	#Level III Comp Sci Elective	#Level III Comp Sci Elective
S2	ELEC ENG 4105 Real-Time & Emb Systems	edded	ELEC ENG 4106 Radio Frequency Systems	ENG 3005 Research Method & Project Management	COMP SCI 3006 Software Engineering & Project
			Ye	ear 5	
S1	ENG 4001A Research Project	Part A	E&E Engineering Elective (see elective table)	E&E Engineering Elective (see elective table)	E&E Engineering Elective (see elective table)
S2	ENG 4001B Research Project	Part B	ELEC ENG 4100 Business Management Systems	E&E Engineering Elective (see elective table)	# Level III Comp Sci Elective
С	ore Courses	Core Cours for Major		Elective	
		ALL	COURSES ARE WORTH 3 UNIT	S UNLESS SPECIFIED OTHERWISE	

# 2023 Study Plan (Semester 1 Start)

**Bachelor of Engineering (Honours) (Electrical & Electronic)** 

with a Bachelor of Mathematical and Computer Sciences



		CHOOSE FROM THE FOLLOWING	G CIV	IL ENGINEERING E	ELECTIVES
<b>S1</b>	COMP SCI 2103 COMP SCI 3001 ELEC ENG 3088 ELEC ENG 4058 ELEC ENG 4063 ELEC ENG 4069 ELEC ENG 4109	Algorithm Design & Data Structures Computer Networks & Applications Computer Architecture Power Quality & Condition Monitoring Communications Radar Principles & Systems Digital Microelectronics	<b>S2</b>	COMP SCI 2103 ELEC ENG 3108 ELEC ENG 3113 ELEC ENG 4061 ELEC ENG 4067 ELEC ENG 4087 ELEC ENG 4107	Algorithm Design & Data Structures Telecommunications Principles Principles of Medical Imaging Image Processing Antennas & Propagation Electricity Market and Power System Operations Autonomous Systems
	ELEC ENG 4112	Signal Processing Applications		ELEC ENG 4111 ELEC ENG 4115	Distributed Generation Technologies Biomedical Instrumentation

# 2023 Study Plan (Semester 1 Start)

**Bachelor of Engineering (Honours) (Electrical & Electronic)** 

with a Bachelor of Mathematical and Computer Sciences



## **Communications Systems Major**

			Year 1	
S1	^ENG 1001 Introduction to Engineering	ELEC ENG 1100 Analog Electronics	ENG 1002 Programming (Matlab and C)	MATHS 1011 Mathematics IA
S2	PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics	ELEC ENG 1102 Digital Electronics	COMP SCI 1102 Object Orientated Programming	MATHS 1012 Mathematics IB
			Year 2	
S1	ELEC ENG 2017 Circuits and Systems	ELEC ENG 2101 Electronics	ELEC ENG 2102 Electric Energy Conversion	MATHS 2106 Differential Equations for Engineers II
S2	ELEC ENG 2100 Digital Systems	ELEC ENG 2104 Digital Signal Processing	ELEC ENG 2106 Vector Calculus & Electromagnetics	MATHS 2107 Statistics & Numerical Methods II
			Year 3	
S1	COMP SCI 2103 Algorithm Design & Data Structures	ELEC ENG 3101 Control	ELEC ENG 3103 Engineering Electromagnetics	COMP SCI 2000 Computer Systems
S2	ELEC ENG 3108 Telecommunications Principles	COMP SCI 2201 Algorithm & Data Structure Analysis	#Level II or III Comp Sci Elective	#Level II or III Comp Sci Elective
			Internship	
All E	ngineering students commencing		ete a minimum of 8 weeks of <u>internship</u> durin ogram Notes.	g the course of their studies – see the
			Year 4	
S1	COMP SCI 3001 Computer Networks & Applications	ENG 3004 Systems Engineering & Indu Practice	#Level III Comp Sci Elective	#Level III Comp Sci Elective
S1 S2	Computer Networks &	Systems Engineering & Indu	#Level III Comp Sci Elective	#Level III Comp Sci Elective  COMP SCI 3006 Software Engineering & Project
	Computer Networks & Applications  ELEC ENG 4054	Systems Engineering & Indu Practice  ELEC ENG 4106	#Level III Comp Sci Elective  ENG 3005 Research Method & Project	COMP SCI 3006
	Computer Networks & Applications  ELEC ENG 4054	Systems Engineering & Indu Practice  ELEC ENG 4106	#Level III Comp Sci Elective  ENG 3005 Research Method & Project Management	COMP SCI 3006
S2	Computer Networks & Applications  ELEC ENG 4054 Telecommunications Systems  ENG 4001A	Systems Engineering & Indu Practice  ELEC ENG 4106 Radio Frequency Systems  ELEC ENG 4063	#Level III Comp Sci Elective  ENG 3005 Research Method & Project Management  Year 5  E&E Engineering Elective (see elective table)  E&E Engineering Elective	COMP SCI 3006 Software Engineering & Project  E&E Engineering Elective

# 2023 Study Plan (Semester 1 Start)

**Bachelor of Engineering (Honours) (Electrical & Electronic)** 

with a Bachelor of Mathematical and Computer Sciences



		CHOOSE FROM THE FOLLOWING	CIV	IL ENGINEERING E	LECTIVES
<b>S1</b>	COMP SCI 3007 ELEC ENG 3088 ELEC ENG 4069 ELEC ENG 4109 ELEC ENG 4112	Artificial Intelligence Computer Architecture Radar Principles & Systems Digital Microelectronics Signal Processing Applications	<b>S2</b>	ELEC ENG 4061 ELEC ENG 4067 ELEC ENG 4105	Image Processing Antennas & Propagation Real-Time & Embedded Systems

# 2023 Study Plan (Semester 1 Start)

**Bachelor of Engineering (Honours) (Electrical & Electronic)** 

with a Bachelor of Mathematical and Computer Sciences

- Computer Science



### **Computer Engineering Major**

Year 1	
S1 Analog Electronics ENG 1002 Programming (Matlab and C) MATHS 10 Mathematic	
S2 PHYSICS 1510 Physics 1E: Mechanics & Digital Electronics  COMP SCI 1102 Object Orientated Programming  MATHS 10 Mathematic	
Year 2	
S1 ELEC ENG 2017 Circuits and Systems Electronics Electric Energy Conversion MATHS 2  Electronics Electric Energy Conversion Differentia Engineers	I Equations for
S2 ELEC ENG 2100 Digital Systems ELEC ENG 2104 Digital Signal Processing ELEC ENG 2106 Vector Calculus & Electromagnetics Statistics &	107 & Numerical Methods II
Year 3	
S1 COMP SCI 2103 Algorithm Design & Data Structures  ELEC ENG 3101 Control Engineering Electromagnetics Computer	CI 2000 Systems
S2 Real-Time & Embedded Systems COMP SCI 2201 #Level II or III Comp Sci Elective	or III Comp Sci Elective
Internship	
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of Program Notes.	of their studies – see the
Year 4	
S1 ELEC ENG 3088 Computer Architecture COMP SCI 3001 Computer Networks & Applications # Level III COMP SCI Elective # Level III	COMP SCI Elective
S2 ENG 3004 Systems Engineering & Industry Practice  S2 ENG 3004 Research Method & Project Management  # Level III COMP SCI Elective Software E	CI 3006 Engineering & Project
Year 5	
S1 ENG 4001A Research Project Part A  ELEC ENG 4109 Digital Microelectronics  E&E Engineering Elective (see elective table)  E&E Engineering Elective	neering Elective ive table)
S2 ENG 4001B Research Project Part B  COMP SCI 3004 Operating Systems  ELEC ENG 4100 Business Management Systems  E&E Engir (see electing)	neering Elective ive table)
Core Courses Core Courses for Minor or Major Elective	

# 2023 Study Plan (Semester 1 Start)

Bachelor of Engineering (Honours) (Electrical & Electronic) with Bachelor of Mathematical and Computer Sciences

- Computer Science



		CHOOSE FROM THE FOLLOWING	LEVE	L 1 ENGINEERING	ELECTIVES
	COMP SCI 3007	Artificial Intelligence		COMP SCI 3307	Secure Programming
	COMP SCI 3308	Cybersecurity Fundamentals		ELEC ENG 3104	Electric Drive Systems
S1	ELEC ENG 4112	Signal Processing Applications	S2	ELEC ENG 3108	Telecommunications Principles
				ELEC ENG 4061	Image Processing
				ELEC ENG 4106	Radio Frequency Systems

# 2023 Study Plan (Semester 1 Start)

Bachelor of Engineering (Honours) (Electrical & Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science



### **Cybersecurity Major**

				Ye	ar 1	
S1	^ENG 1001 Introduction to E	ngineering		NG 1100 Electronics	ENG 1002 Programming (Matlab and C)	MATHS 1011 Mathematics IA
S2	PHYSICS 1510 Physics 1E: Mec Thermodynamics			NG 1102 lectronics	COMP SCI 1102 Object Orientated Programming	MATHS 1012 Mathematics IB
				Ye	ar 2	
S1	ELEC ENG 2017 Circuits and Syst		ELEC El Electron	NG 2101 ics	ELEC ENG 2102 Electric Energy Conversion	MATHS 2106 Differential Equations for Engineers II
S2	ELEC ENG 2100 Digital Systems	<u>)</u>		NG 2104 ignal Processing	ELEC ENG 2106 Vector Calculus & Electromagn	etics MATHS 2107 Statistics & Numerical Methods I
				Ye	ar 3	
S1	COMP SCI 2103 Algorithm Design Structures			SCI 2000 er Systems	ELEC ENG 3101 Control	ELEC ENG 3103 Engineering Electromagnetics
00	COMP SCI 2201 Algorithm & Data			GCI 3004 ng Systems	#Level II or III Comp Sci Electiv	re #Level II or III Comp Sci Elective
52	Analysis					
S2				Inter	nship	
	Analysis	s commencing fro	m 2019 ar	e required to complete a		during the course of their studies – see th
	Analysis	s commencing fro	m 2019 ar	e required to complete a Prograr	minimum of 8 weeks of internship	during the course of their studies – see th
All E	Analysis		ENG 300	e required to complete a Prograr Yea	minimum of 8 weeks of internship n Notes.	
	Analysis  ngineering students  COMP SCI 3308	undamentals	ENG 300 Systems Practice	e required to complete a Program  Yes  04 8 Engineering & Industry  05 h Method & Project	minimum of 8 weeks of internship n Notes.	re #Level III Comp Sci Elective
All E	Analysis  ngineering students  COMP SCI 3308 Cybersecurity Fu	undamentals	ENG 300 Systems Practice ENG 300 Researc	e required to complete a Program  Yea  04 E Engineering & Industry  05 h Method & Project ment	minimum of 8 weeks of internship n Notes.  ar 4  #Level II or III Comp Sci Electiv	#Level III Comp Sci Elective  Te COMP SCI 3006
All E	Analysis  ngineering students  COMP SCI 3308 Cybersecurity Fu	undamentals	ENG 300 Systems Practice ENG 300 Researc Manager	e required to complete a Program  Yea  04 E Engineering & Industry  05 h Method & Project ment	minimum of 8 weeks of internship in Notes.  ar 4  #Level II or III Comp Sci Electiv  #Level II or III Comp Sci Electiv	#Level III Comp Sci Elective  Te COMP SCI 3006
All E	COMP SCI 3308 Cybersecurity Fu  COMP SCI 3307 Secure Programs	undamentals ming et Part A	ENG 300 Systems Practice ENG 300 Researc Manager	e required to complete a Program  Yes  04 5 Engineering & Industry  05 6 h Method & Project ment  Yes  gineering Elective	minimum of 8 weeks of internship in Notes.  ar 4  #Level II or III Comp Sci Elective  #Level II or III Comp Sci Elective	re #Level III Comp Sci Elective re <u>COMP SCI 3006</u> Software Engineering & Project

# 2023 Study Plan (Semester 1 Start)

Bachelor of Engineering (Honours) (Electrical & Electronic) with Bachelor of Mathematical and Computer Sciences

- Computer Science



	CHOOSE FROM THE FOLLOWING	LEVE	L 1 ENGINEERING	ELECTIVES
COMP SCI 3001 ELEC ENG 4063 ELEC ENG 4109	Computer Networks & Applications Communications Digital Microelectronics		ELEC ENG 3104 ELEC ENG 3108 ELEC ENG 4061 ELEC ENG 4105 ELEC ENG 4106	Electric Drive Systems Telecommunications Principles Image Processing Real-Time & Embedded Systems Radio Frequency Systems

# 2023 Study Plan (Semester 1 Start)

Bachelor of Engineering (Honours) (Electrical & Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science



### **Defence Systems Major**

			Ye	ear 1	
S1	^ENG 1001 Introduction to Engineering		ENG 1100 g Electronics	ENG 1002 Programming (Matlab and C)	MATHS 1011 Mathematics IA
S2	PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics		ENG 1102 Electronics	COMP SCI 1102 Object Orientated Programming	MATHS 1012 Mathematics IB
			Ye	ear 2	
S1	ELEC ENG 2017 Circuits and Systems	ELEC Electro	ENG 2101 onics	ELEC ENG 2102 Electric Energy Conversion	MATHS 2106 Differential Equations for Engineers II
S2	ELEC ENG 2100 Digital Systems		ENG 2104 Signal Processing	ELEC ENG 2106 Vector Calculus & Electromagnetics	MATHS 2107 Statistics & Numerical Methods II
			Ye	ear 3	
S1	ELEC ENG 3103 Engineering Electromagnetic		ENG 3101 I	COMP SCI 2103 Algorithm Design & Data Structures	COMP SCI 2000 Computer Systems
S2	ENG 3305 Human Factors for Decision Making		ENG 4107 omous Systems	COMP SCI 2201 Algorithm & Data Structure Analysis	#Level II or III Comp Sci Elective
			Inte	rnship	
All E	ngineering students commenci	ng from 2019	are required to complete a	rnship minimum of 8 weeks of internship during m Notes.	g the course of their studies – see th
All E	ngineering students commenci	ng from 2019	are required to complete a Progra	minimum of 8 weeks of internship during	g the course of their studies – see th
All E	POLIS 1104 Introduction to Comparative Politics	ENG 3	are required to complete a Progra  Ye  004  ns Engineering & Industry	minimum of 8 weeks of internship during m Notes.	the course of their studies – see the see the see the see the see that the see the see that the
S1	POLIS 1104 Introduction to Comparative	ENG 3 Systen Practic	are required to complete a Progra  Yes  004 ns Engineering & Industry the Project  005 rch Method & Project	minimum of 8 weeks of internship during m Notes.	
S1	POLIS 1104 Introduction to Comparative Politics ELEC ENG 4106	ENG 3 Systen Practic ENG 3 Resea	are required to complete a Progra  Yes  004  as Engineering & Industry the Project seement	minimum of 8 weeks of internship during m Notes.  ear 4  # Level III COMP SCI Elective	# Level III COMP SCI Elective  COMP SCI 3006
S1 S2	POLIS 1104 Introduction to Comparative Politics ELEC ENG 4106	ENG 3 System Practic ENG 3 Resea Manag	are required to complete a Progra  Ye  004 ns Engineering & Industry se  005 rch Method & Project gement	minimum of 8 weeks of internship during m Notes.  ear 4  # Level III COMP SCI Elective  #Level III COMP SCI Elective	# Level III COMP SCI Elective  COMP SCI 3006
	POLIS 1104 Introduction to Comparative Politics  ELEC ENG 4106 Radio Frequency Systems  ENG 4001A	ENG 3 Resea Manag  ENG 4 Defend	are required to complete a Progra  Ye  004 ns Engineering & Industry re  005 rch Method & Project rement  Ye  010 re Leadership	minimum of 8 weeks of internship during m Notes.  ear 4  # Level III COMP SCI Elective  #Level III COMP SCI Elective  ear 5  E&E Engineering Elective	# Level III COMP SCI Elective  COMP SCI 3006 Software Engineering & Project  E&E Engineering Elective
S1 S2 S1	POLIS 1104 Introduction to Comparative Politics  ELEC ENG 4106 Radio Frequency Systems  ENG 4001A Research Project Part A  ENG 4001B	ENG 3 Resea Manag  ENG 4 Defend	are required to complete a Progra  Ye  004 ns Engineering & Industry se  005 rch Method & Project sement  Ye  010 ce Leadership	minimum of 8 weeks of internship during m Notes.  ear 4  # Level III COMP SCI Elective  #Level III COMP SCI Elective  E&E Engineering Elective  (see elective table)	# Level III COMP SCI Elective  COMP SCI 3006 Software Engineering & Project  E&E Engineering Elective (see elective table)  ELEC ENG 4100

# 2023 Study Plan (Semester 1 Start)





		CHOOSE FROM THE FOLLOWING	LEVE	L 1 ENGINEERING	ELECTIVES
<b>S1</b>	COMP SCI 2103 COMP SCI 3001 ELEC ENG 4063 ELEC ENG 4069 ELEC ENG 4109 ELEC ENG 4112	Algorithm Design & Data Structures Computer Networks & Applications Communications Radar Principles & Systems Digital Microelectronics Signal Processing Applications	<b>S2</b>	COMP SCI 2103 ELEC ENG 3108 ELEC ENG 4061 ELEC ENG 4067 ELEC ENG 4111	Algorithm Design & Data Structures Telecommunications Principles Image Processing Antennas & Propagation Distributed Generation Technologies

# 2023 Study Plan (Semester 1 Start)

Bachelor of Engineering (Honours) (Electrical & Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science



### **Biomedical Engineering**

AFING 1001   Introduction to Engineering   ELEC ENG 1102   Analog Electronics   Programming (Matlab and C)   MATHS 1011   MATHS 1011   MATHS 1012   MATHS 1012   MATHS 1012   Mathematics IA   MATHS 1012   Mathematics IA   MATHS 1012   Mathematics IB   Mathematics ID   Mathemat
Introduction to Engineering Analog Electronics Programming (Matlab and C) Mathematics IA  PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics  Year 2  ELEC ENG 2101 Circuits and Systems  ELEC ENG 2101 Digital Signal Processing Digital Signal Processing Vector Calculus & Electromagnetics  Year 3  ANAT S C 1102 Human Anatomy and Physiology IA Principles of Medical Imaging All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internships during the course of their studies.  Refer to Program Notes.  Year 4  ENG 3101 Introduction to Medical Technologies ELEC ENG 3004 Systems Engineering & Industry Practice ELEC ENG 3115 ENG 3004 Systems Engineering & Industry Practice ELEC ENG 3115 ENG 3004 Systems Engineering & Industry Practice ELEC ENG 3115 ENG 3004 Systems Engineering & Industry Practice ELEC ENG 3115 ENG 3004 Systems Engineering & Industry Practice ELEC ENG 3115 ENG 3001 Introduction to Medical Technologies ELEC ENG 3005 Research Method & Project Management  Year 5  ENG 4001A Research Project Part A Neuromuscular Systems  All Engineering Elective table) Physiology IIA: Heart, Lung & Neuromuscular Systems  Program Motes  ENG 4001A Research Project Part A Neuromuscular Systems  All Engineering Elective table)  ENG 4001A Research Project Part A Neuromuscular Systems  All Engineering Elective table)  ENG 4001A Research Project Part A Neuromuscular Systems  All Engineering Elective table)
Physics 1E: Mechanics & Digital Electronics  Year 2    ELEC ENG 2017   ELEC ENG 2101   ELEC ENG 2102   Electronics   Engineer II   Electronics   Electronics   Electronics   Electronics   Electronics   Electronics   Electronics   Engineer II   Electronics   Electronics   Electronics   Engineer II   Electronics   Electronics   Engineer II   Electronics   Electronics   Electronics   Electronics   Engineer II   Electronics   Electronics   Engineer II   Electronics   Electronics   Engineer II   Electronics   Electronics
ELEC ENG 2101 Circuits and Systems  ELEC ENG 2102 Electronics  ELEC ENG 2104 Digital Systems  ELEC ENG 2104 Digital Signal Processing  FLEC ENG 2106 Vector Calculus & Electromagnetics  Year 3  ANAT SC 1102 Human Anatomy and Physiology IA ELEC ENG 3103 Engineering Electromagnetics  Computer Systems  ELEC ENG 3101 Control Algorithm Design & Data Structures Algorithm & Data Structure Analysis  Internship  All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internships during the course of their studies. Refer to Program Notes.  Year 4  ENG 3101 Introduction to Medical Technologies  ENG 3004 Systems Engineering & Industry Practice  ENG 3005 Research Method & Project Management  Year 5  E&E Engineering Elective (See elective table)  E&E Engineering Elective (See elective table)  E&E Engineering Elective (See elective table)
Circuits and Systems   Electronics   Electric Energy Conversion   Differential Equations for Engineers II
PLEC ENG 2100 Digital Systems Digital Signal Processing  Year 3  ANAT SC 1102 Human Anatomy and Physiology IA Principles of Medical Imaging  All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internships during the course of their studies.  Refer to Program Notes.  Year 4  ENG 3101 Introduction to Medical Technologies Tengineering & Industry Practice Tengineering Elective (See elective table)
ANAT SC 1102 Human Anatomy and Physiology IA  ELEC ENG 3103 Engineering Electromagnetics  COMP SCI 2001 Control  COMP SCI 2201 Algorithm Design & Data Structures  -Level II or III COMP SCI Elective  Internship  All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internships during the course of their studies. Refer to Program Notes.  Year 4  ENG 3101 Introduction to Medical Technologies Technologies ELEC ENG 4115 Biomedical Instrumentation  FING 3005 Research Method & Project Management  Year 5  ENG 4001A Research Project Part A Physiology IIA: Heart, Lung & Neuromuscular Systems
Human Anatomy and Physiology IA  ELEC ENG 3113 Principles of Medical Imaging  Internship  All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internships during the course of their studies. Refer to Program Notes.  Year 4  ENG 3101 Introduction to Medical Technologies  ELEC ENG 4115 Biomedical Instrumentation  Year 5  ENG 3004 Research Method & Project Management  Year 5  ENG 4001A Research Project Part A  PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems  Principles Comp SCI 2201 Algorithm Design & Data Structures  Comp SCI 2201 Algorithm Design & Data Structures  - Level II or III COMP SCI Elective Internships during the course of their studies.  Refer to Program Notes.  # Level III COMP SCI Elective # Level III COMP SCI Elective Software Engineering & Project Management  Year 5
Internship  All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internships during the course of their studies.  Refer to Program Notes.  Year 4  ENG 3101 Introduction to Medical Technologies Practice  ELEC ENG 4115 Biomedical Instrumentation  Physiology IIA: Heart, Lung & Neuromuscular Systems  Physiology IIA: Heart, Lung & Neuromuscular Systems  Algorithm & Data Structure Analysis  Internship  # Level III COMP SCI Elective  # Level III COMP SCI Elective  COMP SCI 3006 Software Engineering & Project  Management  Year 5  E&E Engineering Elective  (See elective table)
All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internships during the course of their studies.  Refer to Program Notes.  Year 4  ENG 3101 Introduction to Medical Technologies Practice Program Notes.  # Level III COMP SCI Elective Software Engineering & Project Management  Year 5  ENG 4001A Research Project Part A  PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems  Physiology IIA: Heart, Lung & Neuromuscular Systems
Technologies Practice ENG 3005 Biomedical Instrumentation Physiology IIA: Heart, Lung & Neuromuscular Systems  PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems  PYear 4  # Level III COMP SCI Elective Software Engineering & Project
Year 4  ENG 3101 Introduction to Medical Technologies Practice  ELEC ENG 4115 Biomedical Instrumentation  Year 5  ENG 3004 Systems Engineering & Industry Practice  ELEC ENG 4115 Biomedical Instrumentation  Year 5  ENG 3005 Research Method & Project Management  Year 5  ENG 4001A Research Project Part A  PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems  PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems
Introduction to Medical Technologies Practice  ELEC ENG 4115 Biomedical Instrumentation Figure 1  Year 5  ENG 4001A Research Project Part A  Introduction to Medical Systems Engineering & Industry Practice  # Level III COMP SCI Elective Software Engineering & Project Software Eng
ELEC ENG 4115 Biomedical Instrumentation  Fescarch Method & Project Management  Year 5  ENG 4001A Research Project Part A  PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems  Research Project Part A  PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems  # Level III COMP SCI Elective Software Engineering & Project  COMP SCI 3006 Software Engineering & Project  E&E Engineering Elective (See elective table)
ENG4001A Research Project Part A  PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems  E&E Engineering Elective (See elective table)  E&E engineering Elective (See elective table)
Research Project Part A Physiology IIA: Heart, Lung & Neuromuscular Systems (See elective table)
ENG 4001B Research Project Part B  ELEC ENG 4100 Business Management Systems  MECH ENG 4101 Biomechanical Engineering  E&E Engineering Elective (See elective table)
Core Courses For Major Elective

CHOOSE FROM THE FOLLOWING ELECTRICAL & ELECTRONIC (E&E) ENGINEERING ELECTIVES							
	ANAT SC 2006	Foundations of Human Neuroanatomy		COMP SCI 2103	Algorithm Design & Data Structures		
	ANAT SC 2109	Biology and Development of Human Tissues	52	ELEC ENG 3108	Telecommunications Principles		
C1	COMP SCI 2103	Algorithm Design & Data Structures		ELEC ENG 4061	Image Processing		
S1	ELEC ENG 4063	Communications		ELEC ENG 4067	Antennas & Propagation		
	<b>ELEC ENG 4109</b>	Digital Microelectronics					
	ELEC ENG 4112	Signal Processing Applications					

# 2023 Study Plan (Semester 1 Start)

Bachelor of Engineering (Honours) (Electrical & Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science



### **Renewable Energy Major**

				Ye	ar 1			
S1	^ENG 1001 Introduction to Engi	ineering	ELEC ENG 1100 Analog Electronic		ENG 1002 Programming (Matlab and	d C)	MATHS 1011 Mathematics IA	
S2	PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics				COMP SCI 1102 Object Orientated Programming		MATHS 1012 Mathematics IB	
				Ye	ar 2			
S1	ELEC ENG 2017 Circuits and System	ms	ELEC ENG 2101 Electronics		ELEC ENG 2102 Electric Energy Conversion		MATHS 2106 Differential Equatio Engineers II	ns for
52	ELEC ENG 2100 Digital Systems		ELEC ENG 2104 Digital Signal Pro		ELEC ENG 2106 Vector Calculus & Electromagnetics		MATHS 2107 Statistics & Numeri	cal Methods I
				Ye	ar 3			
S1	ELEC ENG 3103 Engineering Electro	omagnetics	ELEC ENG 3101 Control		COMP SCI 2103 Algorithm Design & Data	Structures	COMP SCI 2000 Computer Systems	
	ELEC ENG 3104 Electric Drive Systems		ELEC ENG 3110		COMP SCI 2201 Algorithm & Data Structure Analysis		# Level II or III Com	p Sci Elective
S2		ems	Electric Power Sy	/stems	Algorithm & Data Structur	e Analysis		
S2		ems	Electric Power Sy		Algorithm & Data Structur	e Analysis		
	Electric Drive Syste			Inter			the course of their str	udies – see th
	Electric Drive Syste			<b>Inter</b> d to complete a Prograr	nship minimum of 8 weeks of <u>inter</u>		the course of their st	udies – see th
All E	Electric Drive Syste	commencing fro		Inter od to complete a Prograr Ye	nship minimum of 8 weeks of <u>inter</u> n Notes.	nship during	the course of their st	
All E	Electric Drive System  ngineering students co	commencing fro	m 2019 are require  ENG 3004 Systems Enginee	Interest to complete a Program Yearing & Industry	nship minimum of 8 weeks of <u>internal</u> n Notes.	nship during		i Elective
	MECH ENG 4064 Renewable Power ENG 3004  ELEC ENG 4111 Distributed Generat	commencing fro	m 2019 are require  ENG 3004 Systems Enginee Practice  ENG 3005 Research Method	Interest to complete a Program Yearing & Industry d & Project	minimum of 8 weeks of intern Notes.  ar 4  #Level III Comp Sci Election	nship during	#Level III Comp Sc	i Elective
All E	MECH ENG 4064 Renewable Power ENG 3004  ELEC ENG 4111 Distributed Generat	commencing fro Technologies tion	m 2019 are require  ENG 3004 Systems Enginee Practice  ENG 3005 Research Method	Inter ed to complete a Program  Yearing & Industry ed & Project  Yearing & Froject	minimum of 8 weeks of intern Notes.  ar 4  #Level III Comp Sci Electi #Level III Comp Sci Electi	nship during	#Level III Comp Sc	i Elective
All E1	MECH ENG 4064 Renewable Power ENG 3004 ELEC ENG 4111 Distributed Generat Technologies	Technologies tion	m 2019 are require  ENG 3004 Systems Enginee Practice ENG 3005 Research Method Management  E&E Engineering	Interest to complete a Program Yearing & Industry d & Project Yearing & Flective e)	minimum of 8 weeks of intern Notes.  ar 4  #Level III Comp Sci Electi  #Level III Comp Sci Electi  ar 5  E&E Engineering Elective	nship during	#Level III Comp Sc  COMP SCI 3006 Software Engineeri	i Elective  ng & Project  lective

# 2023 Study Plan (Semester 1 Start)

Bachelor of Engineering (Honours) (Electrical & Electronic) with a Bachelor of Mathematical and Computer Sciences – Computer Science



	CHOOSE FROM THE FOLLOWING LEVEL 1 ENGINEERING ELECTIVES							
<b>S1</b>	COMP SCI 2103 COMP SCI 3001 ELEC ENG 4058 ELEC ENG 4109	Algorithm Design & Data Structures Computer Networks & Applications Power Quality & Condition Monitoring Digital Microelectronics		ELEC ENG 3108	Algorithm Design & Data Structures Telecommunications Principles Electricity Market and Power System Operations			

# 2023 Study Plan (Semester 1 Start)

Bachelor of Engineering (Honours) (Electrical & Electronic) with a Bachelor of Mathematical and Computer Sciences – Computer Science



## **Smart Technologies Major**

			mart rechnologies major					
	Ye	ar 1						
S1 AENG 1001 Introduction to Engineering	ELEC ENG 1100 Analog Electronics	ENG 1002 Programming (Matlab and C)	MATHS 1011 Mathematics IA					
S2 PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics	ELEC ENG 1102 Digital Electronics	COMP SCI 1102 Object Orientated Programmir	ng MATHS 1012 Mathematics IB					
Year 2								
S1 ELEC ENG 2017 Circuits and Systems	ELEC ENG 2101 Electronics	ELEC ENG 2102 Electric Energy Conversion	MATHS 2106 Differential Equations for Engineers II					
S2 <u>ELEC ENG 2100</u> Digital Systems	ELEC ENG 2104 Digital Signal Processing	ELEC ENG 2106 Vector Calculus & Electromag	<u>MATHS 2107</u>					
	Υe	ar 3						
S1 COMP SCI 2103 Algorithm Design & Data Structures	ELEC ENG 3101 Control	ELEC ENG 3103 Engineering Electromagnetics	COMP SCI 2000 Computer Systems					
S2 MECH ENG 3032 Micro-Controller Programming	COMP SCI 2201 Algorithm & Data Structure Analysis	#Level II or III Comp Sci Electi	#Level II or III Comp Sci Elective					
		nship						
All Engineering students commencing		minimum of 8 weeks of internshim Notes.	p during the course of their studies – see the					
	Υe	ar 4						
S1 COMP SCI 3001 Computer Networks & Applications	ENG 3004 Systems Engineering & Industry Practice	#Level II or III Comp Sci Electi	ive #Level II or III Comp Sci Elective					
S2 ELEC ENG 4107 Autonomous Systems	ENG 3005 Research Method & Project Management	#Level II or III Comp Sci Electi	ive COMP SCI 3006 Software Engineering & Project					
Year 5								
S1 ENG 4001A Research Project Part A	E&E Engineering Elective (see elective table)	E&E Engineering Elective (see elective table)	E&E Engineering Elective (see elective table)					
S2 ENG 4001B Research Project Part B	ELEC ENG 3108 Telecommunications Principles	ELEC ENG 4100 Business Management Syster	E&E Engineering Elective (see elective table)					
Core Courses Core Core for Ma		Elective						

#### **CHOOSE FROM THE FOLLOWING E&E ENGINEERING ELECTIVES**

# 2023 Study Plan (Semester 1 Start)





<b>S1</b>	ELEC ENG 4063 ELEC ENG 4069 ELEC ENG 4109	Computer Architecture Communications Radar Principles & Systems Digital Microelectronics Signal Processing Applications	S2	ELEC ENG 3108 ELEC ENG 4061	Software Engineering & Project Telecommunications Principles Image Processing Antennas & Propagation
-----------	---	---	----	--------------------------------	---

# 2023 Study Plan (Semester 1 Start)

Bachelor of Engineering (Honours) (Electrical & Electronic) with a Bachelor of Mathematical and Computer Sciences – Computer Science

