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ROBOTICS AND MECHATRONICS ENGINEERING, TESTAMUR MAJOR (T104)

Western Sydney University Major Code: T104

Previous Code: KT3174.1, MT3055

Available to students in other Western Sydney University programs?

No

Handbook **Summary 2022-2023**

Robotics and Mechatronic engineering combines electrical, computing and mechanical engineering and is at the forefront in designing smart machines and systems, such as pilotless spacecraft, car cruise control, automated factories and medical telerobotics. Students explore intelligent mechanical systems and automation through an extensive and integrated hands-on laboratory program, as well as work-integrated industry projects. Students learn in-depth knowledge about the design and construction of these systems to integrate, evaluate and address their performance. The multidisciplinary skills students develop are sought after by leading edge industries, including aerospace and biomedical engineering. This major includes a mandatory 12 weeks of industrial placement as a completion requirement.

Summary 2024

Robotics and Mechatronic engineering combines electrical, computing and mechanical engineering. It is at the forefront in designing smart machines and systems, such as pilotless spacecraft, car cruise control, automated factories and medical telerobotics. Students explore intelligent mechanical systems and automation through an extensive and integrated hands-on laboratory program, as well as work-integrated industry projects. Students learn in-depth knowledge about the design and construction of these systems to integrate, evaluate and address their performance. The multidisciplinary skills students develop are sought after by leading edge industries, including aerospace and biomedical engineering. All students complete a mandatory 300 to 450 hour industrial placement.

Location

Campus	Mode	Advice	Engineering
Parramatta Campus - Victoria Road	Internal	Major Advice (edbe@westernsydney.ed	du. Yana)r 3
Parramatta City Campus-Macquarie Street	Internal	Major Advice (edbe@westernsydney.ed	
Penrith Campus	Internal	Major Advice	MECH 3005
i cilitai campus		(edbe@westernsydney.ed	Select one A

Major Structure 2022 - 2023

If you commenced in 2024 or later please refer to the Structure 2024 tab for details.

This major is included in Bachelor of Engineering Science, Bachelor of Engineering (Honours), Bachelor of Engineering Advanced (Honours) and Bachelor of Engineering (Honours)/Bachelor of Business.

Please follow the recommended sequence for your program as noted below.

Bachelor of Engineering Advanced (Honours)

This Major will be offered at Engineering Innovation Hub which is part of Parramatta City campus.

Qualification for this award requires the successful completion of 320 credit points which include the subjects listed below.

Start-year intake

Course	Title	Credit Points
Year 1		
Autumn session		
MATH 1034	Mathematics for Engineers 1 (Advanced)	10
ENGR 1024	Introduction to Engineering Practice	10
ENGR 1047	Advanced Engineering Physics 1	10
ENGR 1045	Engineering Programming Fundamentals	10
	Credit Points	40
Spring session		
ELEC 1009	Electrical Circuit Fundamentals	10
MATH 1035	Mathematics for Engineers 2 (Advanced)	10
ENGR 1018	Fundamentals of Mechanics	10
MANU 2001	Design and Manufacturing	10
	Credit Points	40
Year 2		
Autumn session		
ENGR 2027	Engineering Design	10
MECH 2003	Mechanics of Materials	10
MECH 2001	Kinematics and Kinetics of Machines	10
ELEC 1001	Digital Systems 1	10
	Credit Points	40
Spring session		
MECH 2005	Mathematics for Mechanical and Mechatronic Engineers	10
ELEC 2009	Microprocessor Systems	10
MECH 3004	Dynamics of Mechanical Systems	10
ELEC 2008	Microcontrollers and PLCs	10
of completion of 160	maintain a minimum GPA of 5.0 at the end 0 Credit Points, and again at the completion will be automatically transferred to the B. rs) (3740) program.	
	Credit Points	40
u. Yee.e)r 3		
Autumn session		

Advanced Dynamics

Mechanical Design

Credit Points

Mobile Robotics

From Spring 2022 ELEC 3008 is replaced with ELEC 4009

Mechatronic Design

Instrumentation and Measurement

Select one elective

Industrial Experience

Spring session

MECH 4003

MECH 3006

ELEC 3008

Select one Alternate Subject

Instrumentation and Measurement Select one Alternate Subject

ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 4		
Autumn session		
MECH 4004	Robotics	10
ENGR 4037	Advanced Engineering Thesis 1: Preliminary Investigations	10
Select one Altern	ate subject	10
Select one elective	ve	10
	Credit Points	40
Spring session		
ENGR 4036	Advanced Engineering Thesis 2: Detailed Investigations	10
Select one Altern	ate Subject	10
Select two elective	ves	20
	Credit Points	40
	Total Credit Points	320

Alternate Subjects

Subject	Title	Credit Points
HLTH 2003	Biomechanics	10
ENGR 3003	Biomedical Electronics	10
ENGR 3004	Biomedical Signals and Data Analysis	10
MECH 4001	Computational Fluid Dynamics	10
MECH 4002	Computer Aided Engineering	10
ELEC 2007	Engineering Visualization	10
ENGR 2025	Design Graphics: Engineering Documentation	10
ENGR 2024	Design Graphics: Communication for Manufacture	10
CIVL 2003	Fluid Mechanics	10
BIOS 1022	Introduction to Human Biology	10
MECH 3007	Thermal and Fluid Engineering	10
MECH 3008	Thermodynamics and Heat Transfer	10

Minors

SM3093 Computer Aided Design (Mechatronics)

SM3074 Thermal and Fluid Systems

SM3091 Biomedical Engineering

Optional Electives

The following subject is an optional elective subject offered to students who are engaged in a School approved project. This subject can be taken during the third year of this program, however, permission is required to enrol in the subject.

Subject	Title	Credit Points
ENGR 3022	Special Technical Project	10

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2021 or earlier.

MECH 4005 Advanced Engineering Thesis 1: Preliminary Investigations, replaced by ENGR 4037 Advanced Engineering Thesis 1: Preliminary Investigations

MECH 4006 Advanced Engineering Thesis 2: Detailed Investigations, replaced by ENGR 4036 Advanced Engineering Thesis 2: Detailed Investigations

Replaced Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2022 or earlier.

ELEC 3008 Instrumentation and Measurement, replaced by ELEC 4009 Instrumentation and Measurement

Mid-year intake

MECH 4003

MECH 3006

ELEC 3008

One alternate subject

Autumn session

Select one elective

One alternate subject

MECH 3001

MECH 3005

Mid-year intai	(e	
Course	Title	Credit Points
Year 1		
Spring session		
MATH 1034	Mathematics for Engineers 1 (Advanced)	10
ENGR 1018	Fundamentals of Mechanics	10
ELEC 1009	Electrical Circuit Fundamentals	10
MANU 2001	Design and Manufacturing	10
	Credit Points	40
Autumn session		
MATH 1035	Mathematics for Engineers 2 (Advanced)	10
ELEC 1001	Digital Systems 1	10
ENGR 1047	Advanced Engineering Physics 1	10
ENGR 1045	Engineering Programming Fundamentals	10
	Credit Points	40
Year 2		
Spring session		
MECH 2005	Mathematics for Mechanical and Mechatronic Engineers	10
ELEC 2009	Microprocessor Systems	10
ELEC 2008	Microcontrollers and PLCs	10
One alternate sub	ject	10
	Credit Points	40
Autumn session		
ENGR 2027	Engineering Design	10
MECH 2003	Mechanics of Materials	10
ENGR 1024	Introduction to Engineering Practice	10
MECH 2001	Kinematics and Kinetics of Machines	10
of completion of 1 of 200 Credit poin	to maintain a minimum GPA of 5.0 at the end 60 Credit Points, and again at the completion ts will be automatically transferred to the B. burs) (3740) program.	
	Credit Points	40
Year 3		
Spring session		

Mobile Robotics

From Spring 2022 ELEC 3008 is replaced with ELEC 4009

Credit Points

Advanced Dynamics

Mechanical Design

Instrumentation and Measurement

Mechatronic Design

Instrumentation and Measurement

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Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 4		
Spring session		
ENGR 4037	Advanced Engineering Thesis 1: Preliminary Investigations	10
MECH 3004	Dynamics of Mechanical Systems	10
Select two electives		20
	Credit Points	40
Autumn session		
ENGR 4036	Advanced Engineering Thesis 2: Detailed Investigations	10
MECH 4004	Robotics	10
Select one elective		10
One alternate subject		10
	Credit Points	40
	Total Credit Points	320

Alternate Subjects

Subject	Title	Credit Points
HLTH 2003	Biomechanics	10
ENGR 3003	Biomedical Electronics	10
ENGR 3004	Biomedical Signals and Data Analysis	10
MECH 4001	Computational Fluid Dynamics	10
MECH 4002	Computer Aided Engineering	10
ELEC 2007	Engineering Visualization	10
ENGR 2025	Design Graphics: Engineering Documentation	10
ENGR 2024	Design Graphics: Communication for Manufacture	10
CIVL 2003	Fluid Mechanics	10
BIOS 1022	Introduction to Human Biology	10
MECH 3007	Thermal and Fluid Engineering	10
MECH 3008	Thermodynamics and Heat Transfer	10

Minors

SM3093 Computer Aided Design (Mechatronics)

SM3074 Thermal and Fluid Systems

SM3091 Biomedical Engineering

Optional Electives

The following subject is an optional elective subject offered to students who are engaged in a School approved project. This subject can be taken during the third year of this program, however, permission is required to enrol in the subject.

Subject	Title	Credit Points
ENGR 3022	Special Technical Project	10

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2021 or earlier.

MECH 4005 Advanced Engineering Thesis 1: Preliminary Investigations, replaced by ENGR 4037 Advanced Engineering Thesis 1: Preliminary Investigations

MECH 4006 Advanced Engineering Thesis 2: Detailed Investigations, replaced by ENGR 4036 Advanced Engineering Thesis 2: Detailed Investigations

Replaced Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2022 or earlier.

ELEC 3008 Instrumentation and Measurement, replaced by ELEC 4009 Instrumentation and Measurement

Bachelor of Engineering Science

This Major will be offered at Parramatta City and Penrith campuses.

Qualification for this award requires the successful completion of 240 credit points which include the subjects listed in the recommended sequences below.

Start-year intake

Course	Title	Credit Points
Year 1		
Autumn session		
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
ENGR 1024	Introduction to Engineering Practice	10
Select one of the fol	lowing:	10
MATH 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
Note: All students are required to enrol in MATH 1021 Mathematics for Engineers Preliminary first and undertake a readiness test at the beginning of their study.		
This test will be conducted at the beginning of the first semester of enrolment and the result will determine whether a student will remain in MATH 1021 Mathematics for Engineers Preliminary or be transferred by the School to MATH 1016 Mathematics for Engineers 1.		

Engineers Preliminary will then use this unit as an elective.		
	Credit Points	40
Spring session		
ENGR 1018	Fundamentals of Mechanics	10
PROC 1008	Introduction to Materials Engineering	10
Select one of the following:		10
MATH 1016	Mathematics for Engineers 1	
MATH 1019	Mathematics for Engineers 2	
Select one elective		10
Note: Students who	remained in MATH 1021 Mathematics for	

Note: Students who remained in MATH 1021 Mathematics for Engineers Preliminary during the first semester will be required to complete MATH 1016 Mathematics for Engineers 1 during second semester.

The students who finish MATH 1021 Mathematics for

These students must then complete MATH 1019 Mathematics for Engineers 2 during the Summer session.

Credit Points	40
Kinematics and Kinetics of Machines	10
Mechanics of Materials	10
	Kinematics and Kinetics of Machines

Total Credit Points	240
Credit Points	40
must be level 2 or higher	
	10
Power and Machines	10
Engineering Science Project 2	10
Mobile Robotics	10
Credit Points	40
Digital Systems 1	10
Engineering Science Project 1	10
· ·	10
Mechanical Design	10
Orealt i Unito	40
5 /	40
Industrial Experience (Engineering Technologist)	0
e	
•	10
Microcontrollers and PLCs	10
Automated Manufacturing	10
Dynamics of Mechanical Systems	10
Credit Points	40
Specialisation Workshop 1	10
Circuit Theory	10
	Specialisation Workshop 1 Credit Points Dynamics of Mechanical Systems Automated Manufacturing Microcontrollers and PLCs Specialisation Workshop 2 e Industrial Experience (Engineering Technologist) Credit Points Mechanical Design Advanced Dynamics Engineering Science Project 1 Digital Systems 1 Credit Points Mobile Robotics Engineering Science Project 2 Power and Machines must be level 2 or higher Credit Points

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in Autumn 2022 or earlier.

ENGR 1008 - Engineering Materials, replaced by PROC 1008 - Introduction to Materials Engineering

Mid-year intake

Course	Title	Credit Points
Year 1		
Spring session		
Select one of the fo	llowing:	10
MATH 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
ENGR 1018	Fundamentals of Mechanics	10
ELEC 1003	Electrical Fundamentals	10
ENGR 1024	Introduction to Engineering Practice	10
	Credit Points	40
Autumn session		
Select one of the fo	llowing:	10
MATH 1016	Mathematics for Engineers 1	
MATH 1019	Mathematics for Engineers 2	
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
Select one elective		10
Elective unit mu	st be Level 1 or higher	
	Credit Points	40

Year 2 Spring session

ENGR 2001	Automated Manufacturing	10
ELEC 2008	Microcontrollers and PLCs	10
ENGR 3029	Specialisation Workshop 1	10
Select one elective		10
Elective unit mus	t be Level 2 or higher	

	· ·	
	Credit Points	40
Autumn session		
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
ELEC 2001	Circuit Theory	10
ENGR 3030	Specialisation Workshop 2	10
Industrial Experien	nce	
ENGR 2033	Industrial Experience (Engineering Technologist)	0
	Credit Points	40
Year 3		
Spring session		
MECH 4003	Mobile Robotics	10
ENGR 3014	Engineering Science Project 2	10
ELEC 2010	Power and Machines	10
MECH 3004	Dynamics of Mechanical Systems	10
	Credit Points	40
Autumn session		
MECH 3005	Mechanical Design	10
MECH 3001	Advanced Dynamics	10
ENGR 3013	Engineering Science Project 1	10
ELEC 1001	Digital Systems 1	10
	Credit Points	40
	Total Credit Points	240

Bachelor of Engineering (Honours)/ Bachelor of Business (3728)

Qualification for this award requires the successful completion of 400 credit points which include the subjects listed in the recommended sequences below.

Course	Title	Credit Points
Year 1		
Autumn session		
MATH 1016	Mathematics for Engineers 1	10
ENGR 1011	Engineering Physics	10
BBus core unit 1		10
BBus core unit 2		10
	Credit Points	40
Spring session		
MATH 1019	Mathematics for Engineers 2	10
PROC 1008	Introduction to Materials Engineering	10
BBus core unit 3		10
BBus core unit 4		10
	Credit Points	40

Year 2		
Autumn session		
ELEC 1006	Engineering Computing	10
BBus Professional S	ubject 1	10
BBus Professional S	ubject 2	10
BBus Major Subject	1	10
	Credit Points	40
Spring session		
ELEC 1003	Electrical Fundamentals	10
ENGR 1018	Fundamentals of Mechanics	10
BBus Major Subject	2	10
BBus Major Subject	3	10
	Credit Points	40
Year 3		
Autumn session		
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
ELEC 2001	Circuit Theory	10
ELEC 1001	Digital Systems 1	10
	Credit Points	40
Spring session		
MECH 3004	Dynamics of Mechanical Systems	10
ENGR 2001	Automated Manufacturing	10
ELEC 2010	Power and Machines	10
ELEC 2008	Microcontrollers and PLCs	10
	Credit Points	40
Year 4		
Autumn session		
MECH 3005	Mechanical Design	10
MECH 3001	Advanced Dynamics	10
ELEC 2004	Electronics	10
BBus Major Subject		10
	Credit Points	40
Spring session		
MECH 4003	Mobile Robotics	10
BBus Major Subject		10
BBus Major Subject		10
BBus Major Subject		10
Industrial Experience		0
ENGR 3017	Industrial Experience (Engineering)	0
V -	Credit Points	40
Year 5		
Autumn session MECH 4004	Robotics	10
		10
ENGR 4025	Final Year Project 1 (UG Engineering)	10
Business Profession Business Major Subj	•	10
Dusifiess Major Subj	Credit Points	
Spring accoion	Credit Points	40
Spring session	Final Voor Project 2 (LIC Engineering)	10
ENGR 4026 ELEC 3008	Final Year Project 2 (UG Engineering) Instrumentation and Measurement	10 10
	EC 3008 is replaced with ELEC 4009	10
Instrumentation and		
MECH 3006	Mechatronic Design	10

Business Professional Subject 4	10
Credit Points	40
Total Credit Points	400

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in Autumn 2022 or earlier.

ENGR 1008 - Engineering Materials, replaced by PROC 1008 - Introduction to Materials Engineering

Replaced Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2022 or earlier.

ELEC 3008 Instrumentation and Measurement, replaced by ELEC 4009 Instrumentation and Measurement

Mid-year intake

Course	Title	Credit Points
Year 1		
Spring session		
MATH 1016	Mathematics for Engineers 1	10
PROC 1008	Introduction to Materials Engineering	10
BBus Core Subject 1		10
BBus Core Subject 2	2	10
	Credit Points	40
Autumn session		
MATH 1019	Mathematics for Engineers 2	10
ENGR 1011	Engineering Physics	10
BBus Core Subject 3	3	10
BBus Core Subject 4	Į.	10
	Credit Points	40
Year 2		
Spring session		
ELEC 1003	Electrical Fundamentals	10
ENGR 1018	Fundamentals of Mechanics	10
BBus Major Subject	1	10
BBus Major Subject	2	10
	Credit Points	40
Autumn session		
ELEC 1006	Engineering Computing	10
BBus Professional S	Subject 1	10
BBus Professional S	Subject 2	10
BBus Major Subject	3	10
	Credit Points	40
Year 3		
Spring session		
MECH 3004	Dynamics of Mechanical Systems	10
ENGR 2001	Automated Manufacturing	10
ELEC 2010	Power and Machines	10
ELEC 2008	Microcontrollers and PLCs	10
	Credit Points	40
Autumn session		
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
ELEC 2001	Circuit Theory	10

ELEC 1001	Digital Systems 1	10
	Credit Points	40
Year 4		
Spring session		
MECH 4003	Mobile Robotics	10
BBus Major Subje	ect 4	10
BBus Major Subje	ect 5	10
BBus Major Subje	ect 6	10
	Credit Points	40
Autumn session		
MECH 3005	Mechanical Design	10
MECH 3001	Advanced Dynamics	10
ELEC 2004	Electronics	10
BBus Major Subje	ect 7	10
Industrial Experie	nce	
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 5		
Spring session		
ENGR 4025	Final Year Project 1 (UG Engineering)	10
ELEC 3008	Instrumentation and Measurement	10
From Spring 2022 Instrumentation a	PELEC 3008 is replaced with ELEC 4009 and Measurement	
MECH 3006	Mechatronic Design	10
Business Profess	ional Subject 3	10
	Credit Points	40
Autumn session		
ENGR 4026	Final Year Project 2 (UG Engineering)	10
MECH 4004	Robotics	10
Business Profess	ional Subject 4	10
Business Major S	ubject 8	10
	Credit Points	40
	Total Credit Points	400

Bachelor of Engineering (Honours)

Qualification for this award requires the successful completion of 320 credit points which include the subjects listed in the recommended sequences below.

Course	Title	Credit Points
Year 1		
Autumn session		
Select one of the fo	ollowing:	10
MATH 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
ENGR 1024	Introduction to Engineering Practice	10
	Credit Points	40
Spring session		
Select one of the fo	ollowing:	10
MATH 1016	Mathematics for Engineers 1	
MATH 1019	Mathematics for Engineers 2	
ENGR 1018	Fundamentals of Mechanics	10
ELEC 1003	Electrical Fundamentals	10

	Total Credit Points	320
	Credit Points	40
Elective unit mu	ust be Level 2 or higher	
Select one elective		10
One alternate subje		10
ENGR 4026	Final Year Project 2 (UG Engineering)	10
Spring session MECH 4002	Computer Aided Engineering	10
	Credit Points	40
Elective unit mu	ust be Level 2 or higher	
Select one elective		10
One alternate subje	ect	10
ENGR 4025	Final Year Project 1 (UG Engineering)	10
MECH 4004	Robotics	10
Year 4 Autumn session		
	Credit Points	40
ENGR 3017	Industrial Experience (Engineering)	(
Industrial Experience	-	
•	ust be Level 2 or higher	
One alternate subje	ect	10
Select one elective		10
One alternate subje		10
MECH 3006	Mechatronic Design	10
Spring session	5.3ai() 0iii0	-71
2011 1000	Credit Points	40
MECH 4003	Mobile Robotics	10
ELEC 2004	Electronics	10
MECH 3001	Advanced Dynamics	10
MECH 3005	Mechanical Design	10
Autumn session		
Year 3	Credit Follits	40
LLLU ZUUU	Credit Points	40
ELEC 2010	Microcontrollers and PLCs	10
ELEC 2010	Automated Manufacturing Power and Machines	10
MECH 3004 ENGR 2001	Dynamics of Mechanical Systems	10
Spring session		
	Credit Points	40
ELEC 1001	Digital Systems 1	10
ELEC 2001	Circuit Theory	10
MECH 2003	Mechanics of Materials	10
MECH 2001	Kinematics and Kinetics of Machines	10
Autumn session		
Year 2	0.000.1	-
	Credit Points	4
 Elective unit mu 		
	Credit Points	

Mid-year intal	Ke	
Course	Title	Credi
Year 1		Point
Spring session		
Select one of the f	followina:	10
MATH 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
ENGR 1018	Fundamentals of Mechanics	10
PROC 1008	Introduction to Materials Engineering	10
ENGR 1024	Introduction to Engineering Practice	10
	Credit Points	4(
Autumn session		
Select one of the f	following:	10
MATH 1016	Mathematics for Engineers 1	
MATH 1019	Mathematics for Engineers 2	
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
Select one elective	• • •	10
Elective unit m	nust be Level 1 or higher	
	Credit Points	40
Year 2		
Spring session		
ENGR 2001	Automated Manufacturing	10
ELEC 2008	Microcontrollers and PLCs	10
One alternate sub	ject	10
Select one elective		10
Elective unit m	nust be Level 2 or higher	
	Credit Points	40
Autumn session	Credit Politis	40
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
ELEC 2001	Circuit Theory	10
ELEC 1001	Digital Systems 1	10
LLLC 1001	Credit Points	40
Year 3	Credit Follits	40
Spring session	Machatuania Dasius	1.0
MECH 3006	Mechatronic Design	10
MECH 3004	Dynamics of Mechanical Systems	10
ELEC 2010	Power and Machines	10
One alternate sub		10
	Credit Points	40
Autumn session		
MECH 3005	Mechanical Design	10
MECH 3001	Advanced Dynamics	10
ELEC 2004	Electronics	10
MECH 4003	Mobile Robotics	10
Industrial Experie		
ENGR 3017	Industrial Experience (Engineering)	(
V 4	Credit Points	40
Year 4		
Spring session	Communitary Airland Francisco	
MECH 4002	Computer Aided Engineering	10
ENGR 4026	Final Year Project 2 (UG Engineering)	10
One alternate sub	ject	10

Select one elective		10
 Elective unit 	must be Level 2 or higher	
	Credit Points	40
Autumn session		
MECH 4004	Robotics	10
ENGR 4025	Final Year Project 1 (UG Engineering)	10
One alternate subject		10
Select one elective		10
Elective unit	must be Level 2 or higher	
Credit Points		40
Total Credit Points		320

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in Autumn 2022 or earlier.

ENGR 1008 - Engineering Materials, replaced by PROC 1008 - Introduction to Materials Engineering

Major Structure 2024

This major structure applies to students who commenced in 2024 or later. If you commenced prior to 2024 please refer to the Structure 2022-23 tab for details.

This major is included in Bachelor of Engineering Science, Bachelor of Engineering (Honours), Bachelor of Engineering Advanced (Honours) and Bachelor of Engineering (Honours)/Bachelor of Business.

Please follow the recommended sequence for your program as noted below.

Bachelor of Engineering Advanced (Honours) (3771)

Qualification for this award requires the successful completion of 320 credit points which include the subjects listed below.

Course	Title	Credit Points
Year 1		
Autumn session		
MATH 1034	Mathematics for Engineers 1 (Advanced)	10
ENGR 1024	Introduction to Engineering Practice	10
ENGR 1047	Advanced Engineering Physics 1	10
ELEC 1006	Engineering Computing	10
	Credit Points	40
Spring session		
ELEC 1003	Electrical Fundamentals	10
MATH 1035	Mathematics for Engineers 2 (Advanced)	10
ENGR 1018	Fundamentals of Mechanics	10
ENGR 2023	Advanced Engineering Physics 2	10
	Credit Points	40
Year 2		
Autumn session		
ENGR 2035	Modern Digital Design and Development	10
MECH 2003	Mechanics of Materials	10
MECH 2001	Kinematics and Kinetics of Machines	10

	Total Credit Points	320
	Credit Points	40
Select one elective	or Minor subjecs	10
MECH 4003	Mobile Robotics	10
ENGR 4044	Advanced Engineering Thesis 2: Detailed Investigations	20
Spring session		.0
	Credit Points	40
Select one elective		10
MECH 4004	Preliminary Investigations Robotics	10
ENGR 4043	Advanced Engineering Thesis 1:	20
Year 4 Autumn session		
V 4	Credit Points	40
ENGR 3017	Industrial Experience (Engineering)	0
Industrial Experience		
Select one elective	·	10
ELEC 2008	Microcontrollers and PLCs	10
ELEC 4009	Instrumentation and Measurement	10
MECH 3006	Mechatronic Design	10
Spring session		
	Credit Points	40
BUSM 2049	Creative and Innovative Thinkers	10
PROC 2003	Materials Selection and Design	10
MECH 3005	Mechanical Design	10
MECH 3001	Advanced Dynamics	10
Autumn session		
Year 3		
Engineering (Honou	•	40
Students who fail to of completion of 16	o maintain a minimum GPA of 5.0 at the end 0 Credit Points, and again at the completion will be automatically transferred to the B.	
Select one elective	•	10
ENGR 2001	Automated Manufacturing	10
MECH 3004	Dynamics of Mechanical Systems	10
Spring session ELEC 2009	Microprocessor Systems	10
	Credit Points	40
ELEC 1001	Digital Systems 1	10

Optional Electives

The following subject is an optional elective subject offered to students who are engaged in a School approved project. This subject can be taken during the third year of this program, however, permission is required to enrol in the subject.

Subject	Title	Credit Points
ENGR 3022	Special Technical Project	10

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2023 or earlier.

BUSM 2047 Venture Makers Foundations, replaced by BUSM 2049 Creative and Innovative Thinkers

Mid-year intake

Mid-year intake		
Course	Title	Credit Points
Year 1		
Spring session		
MATH 1034	Mathematics for Engineers 1 (Advanced)	10
ENGR 1018	Fundamentals of Mechanics	10
ELEC 1003	Electrical Fundamentals	10
ENGR 2023	Advanced Engineering Physics 2	10
	Credit Points	40
Autumn session		
MATH 1035	Mathematics for Engineers 2 (Advanced)	10
ELEC 1001	Digital Systems 1	10
ENGR 1047	Advanced Engineering Physics 1	10
ELEC 1006	Engineering Computing	10
	Credit Points	40
Year 2		
Spring session		
ELEC 2009	Microprocessor Systems	10
ELEC 2008	Microcontrollers and PLCs	10
ENGR 2001	Automated Manufacturing	10
Select one elective o	•	10
	Credit Points	40
Autumn session		
ENGR 2035	Modern Digital Design and Development	10
MECH 2003	Mechanics of Materials	10
ENGR 1024	Introduction to Engineering Practice	10
MECH 2001	Kinematics and Kinetics of Machines	10
of completion of 160	maintain a minimum GPA of 5.0 at the end Credit Points, and again at the completion will be automatically transferred to the B. s) (3740) program.	
	Credit Points	40
Year 3		
Spring session		
MECH 3006	Mechatronic Design	10
Select one elective o	r Minor subject	10
ELEC 4009	Instrumentation and Measurement	10
MECH 3004	Dynamics of Mechanical Systems	10
	Credit Points	40
Autumn session		
MECH 3001	Advanced Dynamics	10
MECH 3005	Mechanical Design	10
PROC 2003	Materials Selection and Design	10
BUSM 2049	Creative and Innovative Thinkers	10
Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
Year 4	Credit Points	40
Spring session		
ENGR 4043	Advanced Engineering Thesis 1: Preliminary Investigations	20
MECH 4003	Mobile Robotics	10
Select one elective o	r Minor subject	10
	Credit Points	40

40

240

Autumn session

	Total Credit Points	320
	Credit Points	40
Select one elective	or minor subject	10
MECH 4004	Robotics	10
ENGR 4044	Advanced Engineering Thesis 2: Detailed Investigations	20

Optional Electives

The following subject is an optional elective subject offered to students who are engaged in a School approved project. This subject can be taken during the third year of this program, however, permission is required to enrol in the subject.

Subject	Title	Credit
		Points
ENGR 3022	Special Technical Project	10

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2023 or earlier.

BUSM 2047 Venture Makers Foundations, replaced by BUSM 2049 Creative and Innovative Thinkers

Bachelor of Engineering Science (3691)

This Major will be offered at Parramatta City and Penrith campuses.

Qualification for this award requires the successful completion of 240 credit points which include the subjects listed in the recommended sequences below.

Start-year intake

Course	Title	Credit Points
Year 1		
Autumn session		
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
ENGR 1024	Introduction to Engineering Practice	10
Select one of the fol	owing:	10
MATH 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
Mathematics for Eng	e required to enrol in MATH 1021 gineers Preliminary first and undertake a beginning of their study.	
semester of enrolme student will remain i	ducted at the beginning of the first ent and the result will determine whether a in MATH 1021 Mathematics for Engineers insferred by the School to MATH 1016 gineers 1.	
	nish MATH 1021 Mathematics for ry will then use this unit as an elective.	
Linginice of Tellimina	Credit Points	40

Engineers Preliminary will then use this unit as an elective.		
	Credit Points	40
Spring session		
ENGR 1018	Fundamentals of Mechanics	10
PROC 1008	Introduction to Materials Engineering	10
ELEC 1003	Electrical Fundamentals	10
Select one of the following:		10
MATH 1016	Mathematics for Engineers 1	

MATH 1019	Mathematics for Engineers 2
Note: Students w	ho remained in MATH 1021 Mathematics for
Engineers Prelimi	nary during the first semester will be required
to complete MAT	H 1016 Mathematics for Engineers 1 during
second semester	
These students n	nust then complete MATH 1019 Mathematics

for Engineers 2 durin	ng the Summer session.	
	Credit Points	40
Year 2		
Autumn session		
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
ELEC 2001	Circuit Theory	10
ENGR 3029	Specialisation Workshop 1	10
	Credit Points	40
Spring session		
MECH 3004	Dynamics of Mechanical Systems	10
ENGR 2001	Automated Manufacturing	10
ELEC 2008	Microcontrollers and PLCs	10
ENGR 3030	Specialisation Workshop 2	10
Industrial Experience	e	
ENGR 2033	Industrial Experience (Engineering Technologist)	0
	Credit Points	40
Year 3		
Autumn session		
MECH 3005	Mechanical Design	10
MECH 3001	Advanced Dynamics	10
ENGR 3013	Engineering Science Project 1	10
ELEC 1001	Digital Systems 1	10
	Credit Points	40
Spring session		
MECH 4003	Mobile Robotics	10
ENGR 3014	Engineering Science Project 2	10
Select two electives		20

Mid-year intake

Note: Elective subjects must be level 2 or higher

Credit Points

Total Credit Points

Course	Title	Credit
		Points
Year 1		
Spring session		
ENGR 1018	Fundamentals of Mechanics	10
PROC 1008	Introduction to Materials Engineering	10
ELEC 1003	Electrical Fundamentals	10
Select one of the fol	lowing:	10
MATH 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
	Credit Points	40
Autumn session		
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
ENGR 1024	Introduction to Engineering Practice	10
Select one of the fol	lowing:	10
MATH 1016	Mathematics for Engineers 1	

MATH 1019	Mathematics for Engineers 2	
	Credit Points	40
Year 2		
Spring session		
ENGR 2001	Automated Manufacturing	10
ELEC 2008	Microcontrollers and PLCs	10
ENGR 3029	Specialisation Workshop 1	10
Select one elective		10
 Elective subject 	must be Level 2 or higher	
	Credit Points	40
Autumn session		
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
ELEC 2001	Circuit Theory	10
ENGR 3030	Specialisation Workshop 2	10
Industrial Experience	e	
ENGR 2033	Industrial Experience (Engineering Technologist)	0
	Credit Points	40
Year 3		
Spring session		
MECH 4003	Mobile Robotics	10
ENGR 3013	Engineering Science Project 1	10
MECH 3004	Dynamics of Mechanical Systems	10
Select one elective		10
Elective subject	must be Level 2 or higher	
	Credit Points	40
Autumn session		
MECH 3005	Mechanical Design	10
MECH 3001	Advanced Dynamics	10
ENGR 3014	Engineering Science Project 2	10
ELEC 1001	Digital Systems 1	10
	Credit Points	40
	Total Credit Points	240

Bachelor of Engineering (Honours)/ Bachelor of Business (3800)

Qualification for this award requires the successful completion of 440 credit points which include the subjects listed in the recommended sequences below.

Po	ints
Year 1	
Autumn session	
ENGR 1011 Engineering Physics	10
MATH 1016 Mathematics for Engineers 1	10
BBus core subject 1	10
BBus core subject 2	10
Credit Points	40
Spring session	
PROC 1008 Introduction to Materials Engineering	10
MATH 1019 Mathematics for Engineers 2	10
ELEC 1003 Electrical Fundamentals	10

BBus core subject 3		10
	Credit Points	40
Year 2		
Autumn session		10
ENGR 1024	Introduction to Engineering Practice	10
ELEC 1001	Digital Systems 1	10
ENGR 1018	Fundamentals of Mechanics	10
BBus Core Subject 4		10
O	Credit Points	40
Spring session	Assessment Address of the Assessment	10
ENGR 2001	Automated Manufacturing	10
COMP 2023	Mathematical Programming	10
BBus Professional S		10
BBus Professional S		10
v •	Credit Points	40
Year 3		
Autumn session		
MECH 2003	Mechanics of Materials	10
ELEC 1006	Engineering Computing	10
ELEC 2001	Circuit Theory	10
MECH 2001	Kinematics and Kinetics of Machines	10
	Credit Points	40
Spring session		
ELEC 2008	Microcontrollers and PLCs	10
MECH 3004	Dynamics of Mechanical Systems	10
BBus Major Subject		10
BBus Major Subject		10
	Credit Points	40
Year 4		
Autumn session		
MECH 3005	Mechanical Design	10
ELEC 2004	Electronics	10
BBus Major Subject		10
BBus Major Subject	4	
		10
	Credit Points	10 40
Spring session	Credit Points	
ELEC 4009	Instrumentation and Measurement	
		40
ELEC 4009 ELEC 2010 BBus Major Subject	Instrumentation and Measurement Power and Machines 5	40
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject	Instrumentation and Measurement Power and Machines 5	10 10
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experience	Instrumentation and Measurement Power and Machines 5 6	10 10 10
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering)	10 10 10
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experience	Instrumentation and Measurement Power and Machines 5 6	10 10 10 10
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experience	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering)	10 10 10 10 0
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experienc ENGR 3017	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering)	10 10 10 10 0
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experienc ENGR 3017 Year 5	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering)	10 10 10 10 0
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experienc ENGR 3017 Year 5 Autumn session MECH 4004 MECH 3001	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering) Credit Points Robotics Advanced Dynamics	40 10 10 10 10 10 40
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experienc ENGR 3017 Year 5 Autumn session MECH 4004	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering) Credit Points Robotics Advanced Dynamics	40 10 10 10 10 0 40
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experienc ENGR 3017 Year 5 Autumn session MECH 4004 MECH 3001	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering) Credit Points Robotics Advanced Dynamics 7	40 10 10 10 10 10 40 10 10 10 10 10
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experienc ENGR 3017 Year 5 Autumn session MECH 4004 MECH 3001 BBus Major Subject	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering) Credit Points Robotics Advanced Dynamics 7	40 10 10 10 10 10 40 10 10 10 10 10 10 10
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experienc ENGR 3017 Year 5 Autumn session MECH 4004 MECH 3001 BBus Major Subject BBus Major Subject Spring session	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering) Credit Points Robotics Advanced Dynamics 7 8 Credit Points	40 10 10 10 10 40 40
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experienc ENGR 3017 Year 5 Autumn session MECH 4004 MECH 3001 BBus Major Subject BBus Major Subject	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering) Credit Points Robotics Advanced Dynamics 7 8 Credit Points Final Year Project 1 (UG Engineering)	40 10 10 10 10 40 40
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experienc ENGR 3017 Year 5 Autumn session MECH 4004 MECH 3001 BBus Major Subject BBus Major Subject Spring session	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering) Credit Points Robotics Advanced Dynamics 7 8 Credit Points	40 10 10 10 10 40 40 10 40 40
ELEC 4009 ELEC 2010 BBus Major Subject BBus Major Subject Industrial Experienc ENGR 3017 Year 5 Autumn session MECH 4004 MECH 3001 BBus Major Subject BBus Major Subject Spring session ENGR 4041	Instrumentation and Measurement Power and Machines 5 6 e Industrial Experience (Engineering) Credit Points Robotics Advanced Dynamics 7 8 Credit Points Final Year Project 1 (UG Engineering)	40 10 10 10 10 40 40 10 40 20

Year 6		
Autumn session		
ENGR 4042	Final Year Project 2 (UG Engineering)	20
BBus Professional	. ,	10
BBus Professional	,	10
	Credit Points	40
	Total Credit Points	440
	Total orealt Folias	440
Mid-year intak	e	
Course	Title	Credit
		Points
Year 1		
Spring session		
MATH 1016	Mathematics for Engineers 1	10
ELEC 1003	Electrical Fundamentals	10
BBus Core Subject	1	10
BBus Core Subject	2	10
	Credit Points	40
Autumn session		
MATH 1019	Mathematics for Engineers 2	10
ENGR 1011	Engineering Physics	10
ENGR 1024	Introduction to Engineering Practice	10
ENGR 1018	Fundamentals of Mechanics	10
	Credit Points	40
Year 2		
Spring session		
PROC 1008	Introduction to Materials Engineering	10
COMP 2023	Mathematical Programming	10
BBus Core Subject	3	10
BBus Core Subject	4	10
	Credit Points	40
Autumn session		
MECH 2003	Mechanics of Materials	10
ELEC 1006	Engineering Computing	10
ELEC 1001	Digital Systems 1	10
MECH 2001	Kinematics and Kinetics of Machines	10
	Credit Points	40
Year 3		
Spring session		
MECH 3004	Dynamics of Mechanical Systems	10
ENGR 2001	Automated Manufacturing	10
BBus Professional	Subject 1	10
BBus Professional	Subject 2	10
	Credit Points	40
Autumn session		
MECH 2001	Kinematics and Kinetics of Machines	10
ELEC 2004	Electronics	10
BBus Major Subject 1		10
BBus Major Subjec	t 2	10
	Credit Points	40
Year 4		
Year 4 Spring session		
	Microcontrollers and PLCs	10
Spring session	Microcontrollers and PLCs Power and Machines	10 10

BBus Major Subj	ect 4	10
	Credit Points	40
Autumn session		
MECH 3005	Mechanical Design	10
MECH 3001	Advanced Dynamics	10
MECH 4004	Robotics	10
BBus Major Subj	ect 5	10
Industrial Experi	ence	
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 5		
Spring session		
ELEC 4009	Instrumentation and Measurement	10
BBus Major Subject 6		10
BBus Major Subject 7		10
BBus Major Subj	ect 8	10
	Credit Points	40
Autumn session		
ENGR 4041	Final Year Project 1 (UG Engineering)	20
BBus Profession	al Subject 3	10
BBus Profession	al Subject 4	10
	Credit Points	40
Year 6		
Spring session		
ENGR 4042	Final Year Project 2 (UG Engineering)	20
MECH 3006	Mechatronic Design	10
MECH 4003	Mobile Robotics	10
	Credit Points	40
	Total Credit Points	440

Bachelor of Engineering (Honours) (3740)

Qualification for this award requires the successful completion of 320 credit points which include the subjects listed in the recommended sequences below.

Course	Title	Credit Points
Year 1		
Autumn session		
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
ENGR 1024	Introduction to Engineering Practice	10
Select one of the fo	ollowing:	10
MATH 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
	Credit Points	40
Spring session		
ENGR 1018	Fundamentals of Mechanics	10
ELEC 1003	Electrical Fundamentals	10
PROC 1008	Introduction to Materials Engineering	10
Select one of the following:		10
MATH 1016	Mathematics for Engineers 1	
MATH 1019	Mathematics for Engineers 2	
	Credit Points	40

Autumn session		
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
ELEC 2001	Circuit Theory	10
ELEC 1001	Digital Systems 1	10
	Credit Points	40
Spring session		
MECH 3004	Dynamics of Mechanical Systems	10
ENGR 2001	Automated Manufacturing	10
COMP 2023	Mathematical Programming	10
ELEC 2008	Microcontrollers and PLCs	10
	Credit Points	40
Year 3		
Autumn session		10
MECH 3005	Mechanical Design	10
MECH 3001	Advanced Dynamics	10
ELEC 2004	Electronics	10
Select one elective of	·	10
Coming a consista	Credit Points	40
Spring session MECH 3006	Machatrania Dagian	10
ELEC 2010	Mechatronic Design Power and Machines	10
MECH 4003	Mobile Robotics	10
ELEC 4009	Instrumentation and Measurement	10
Industrial Experience		10
ENGR 3017	Industrial Experience (Engineering)	0
ENGITOOTT	Credit Points	40
Year 4	oredit i onits	40
Autumn session		
MECH 4004	Robotics	10
ENGR 4041	Final Year Project 1 (UG Engineering)	20
Select one elective of		10
	Credit Points	40
Spring session		
ENGR 4042	Final Year Project 2 (UG Engineering)	20
ENGR 4042 Select two electives	Final Year Project 2 (UG Engineering) or minor subjects	20 20
	or minor subjects	20
Select two electives	or minor subjects Credit Points Total Credit Points	20 40
	or minor subjects Credit Points Total Credit Points	20 40
Select two electives	or minor subjects Credit Points Total Credit Points	20 40 320 Credit
Select two electives Mid-year intake Course	or minor subjects Credit Points Total Credit Points	20 40 320
Mid-year intake Course Year 1	or minor subjects Credit Points Total Credit Points	20 40 320 Credit
Mid-year intake Course Year 1 Spring session	or minor subjects Credit Points Total Credit Points Title	20 40 320 Credit Points
Mid-year intake Course Year 1 Spring session ENGR 1018	or minor subjects Credit Points Total Credit Points Title Fundamentals of Mechanics	20 40 320 Credit Points
Mid-year intake Course Year 1 Spring session ENGR 1018 ELEC 1003	or minor subjects Credit Points Total Credit Points Title Fundamentals of Mechanics Electrical Fundamentals	20 40 320 Credit Points
Mid-year intake Course Year 1 Spring session ENGR 1018 ELEC 1003 PROC 1008	or minor subjects Credit Points Total Credit Points Title Fundamentals of Mechanics Electrical Fundamentals Introduction to Materials Engineering	20 40 320 Credit Points
Mid-year intake Course Year 1 Spring session ENGR 1018 ELEC 1003 PROC 1008 Select one of the following	or minor subjects Credit Points Total Credit Points Title Fundamentals of Mechanics Electrical Fundamentals Introduction to Materials Engineering lowing:	20 40 320 Credit Points
Mid-year intake Course Year 1 Spring session ENGR 1018 ELEC 1003 PROC 1008 Select one of the foll MATH 1021	Credit Points Total Credit Points Title Fundamentals of Mechanics Electrical Fundamentals Introduction to Materials Engineering owing: Mathematics for Engineers Preliminary	20 40 320 Credit Points
Mid-year intake Course Year 1 Spring session ENGR 1018 ELEC 1003 PROC 1008 Select one of the following	Credit Points Total Credit Points Title Fundamentals of Mechanics Electrical Fundamentals Introduction to Materials Engineering owing: Mathematics for Engineers Preliminary Mathematics for Engineers 1	20 40 320 Credit Points
Mid-year intake Course Year 1 Spring session ENGR 1018 ELEC 1003 PROC 1008 Select one of the foll MATH 1021 MATH 1016	Credit Points Total Credit Points Title Fundamentals of Mechanics Electrical Fundamentals Introduction to Materials Engineering owing: Mathematics for Engineers Preliminary	20 40 320 Credit Points
Mid-year intake Course Year 1 Spring session ENGR 1018 ELEC 1003 PROC 1008 Select one of the foll MATH 1021 MATH 1016 Autumn session	Credit Points Total Credit Points Title Fundamentals of Mechanics Electrical Fundamentals Introduction to Materials Engineering lowing: Mathematics for Engineers Preliminary Mathematics for Engineers 1 Credit Points	20 40 320 Credit Points 10 10 10
Mid-year intake Course Year 1 Spring session ENGR 1018 ELEC 1003 PROC 1008 Select one of the foll MATH 1021 MATH 1016 Autumn session ELEC 1006	Credit Points Total Credit Points Title Fundamentals of Mechanics Electrical Fundamentals Introduction to Materials Engineering owing: Mathematics for Engineers Preliminary Mathematics for Engineers 1 Credit Points Engineering Computing	20 40 320 Credit Points 10 10 10 10 10
Mid-year intake Course Year 1 Spring session ENGR 1018 ELEC 1003 PROC 1008 Select one of the foll MATH 1021 MATH 1016 Autumn session	Credit Points Total Credit Points Title Fundamentals of Mechanics Electrical Fundamentals Introduction to Materials Engineering lowing: Mathematics for Engineers Preliminary Mathematics for Engineers 1 Credit Points	20 40 320 Credit Points 10 10 10

	Total Credit Points	320
	Credit Points	40
Select one elective	or minor subject	10
ENGR 4042	Final Year Project 2 (UG Engineering)	20
MECH 4004	Robotics	10
Autumn session		
	Credit Points	40
Select one elective of		10
MECH 4003	Mobile Robotics	10
ENGR 4041	Final Year Project 1 (UG Engineering)	20
Spring session		
Year 4	Oreant Folints	40
	Credit Points	40
ENGR 3017	Industrial Experience (Engineering)	0
Industrial Experience	•	10
Select one elective of		10
ELEC 2004	Electronics	10
MECH 3005 MECH 3001	Mechanical Design Advanced Dynamics	10
MECH 3005	Machanical Design	10
Autumn session	Credit Follits	40
LLLU 4003	Credit Points	40
ELEC 2010 ELEC 4009	Instrumentation and Measurement	10
MECH 3004 ELEC 2010	Dynamics of Mechanical Systems Power and Machines	10
MECH 3006	Mechatronic Design	10 10
Spring session	Machatronia Daoige	10
Year 3		
V0	Credit Points	40
ELEC 1001	Digital Systems 1	10
ELEC 2001	Circuit Theory	10
MECH 2003	Mechanics of Materials	10
MECH 2001	Kinematics and Kinetics of Machines	10
Autumn session		
	Credit Points	40
Select one elective		10
ELEC 2008	Microcontrollers and PLCs	10
COMP 2023	Mathematical Programming	10
ENGR 2001	Automated Manufacturing	10
Spring session		
Year 2		
	Credit Points	40
MATH 1019	Mathematics for Engineers 2	
MATH 1016	Mathematics for Engineers 1	
Select one of the following:		10

Related Programs

Bachelor of Engineering (Honours)/Bachelor of Business (3728) (https://hbook.westernsydney.edu.au/programs/bachelor-engineering-honours-bachelor-business/)

Bachelor of Engineering (Honours) (3740) (https://

hbook.westernsydney.edu.au/programs/bachelor-engineering-honours/)

Bachelor of Engineering Advanced (Honours) (3771) (https://hbook.westernsydney.edu.au/programs/bachelor-engineering-advanced-honours/)

Bachelor of Engineering Science (3691) (https://hbook.westernsydney.edu.au/programs/bachelor-engineering-science/)