

# 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	Credit Points
Parramatta Campus - Victoria Road	Internal	Major Advice (edbe@westernsydney.edu.au)	40
Parramatta City Campus-Macquarie Street	Internal	Major Advice (edbe@westernsydney.edu.au)	
Penrith Campus	Internal	Major Advice (edbe@westernsydney.edu.au)	

## 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
<b>Year 1</b>		
<b>Autumn session</b>		
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
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
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
	<b>Credit Points</b>	<b>40</b>
<b>Year 2</b>		
<b>Autumn session</b>		
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
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
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
Students who fail to maintain a minimum GPA of 5.0 at the end of completion of 160 Credit Points, and again at the completion of 200 Credit points will be automatically transferred to the B. Engineering (Honours) (3740) program.		
	<b>Credit Points</b>	<b>40</b>
<b>Year 3</b>		
<b>Autumn session</b>		
MECH 3001	Advanced Dynamics	10
MECH 3005	Mechanical Design	10
Select one Alternate Subject		10
Select one elective		10
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
MECH 4003	Mobile Robotics	10
MECH 3006	Mechatronic Design	10
ELEC 3008	Instrumentation and Measurement	10
From Spring 2022 ELEC 3008 is replaced with ELEC 4009 Instrumentation and Measurement		
Select one Alternate Subject		10
<b>Industrial Experience</b>		

ENGR 3017	Industrial Experience (Engineering)	0	MECH 4006 Advanced Engineering Thesis 2: Detailed Investigations, replaced by ENGR 4036 Advanced Engineering Thesis 2: Detailed Investigations
	<b>Credit Points</b>	<b>40</b>	
<b>Year 4</b>			
<b>Autumn session</b>			
MECH 4004	Robotics	10	The subjects listed below count towards completion of this program for students who passed these subjects in 2022 or earlier.
ENGR 4037	Advanced Engineering Thesis 1: Preliminary Investigations	10	ELEC 3008 Instrumentation and Measurement, replaced by ELEC 4009 Instrumentation and Measurement
Select one Alternate subject		10	
Select one elective		10	
	<b>Credit Points</b>	<b>40</b>	
<b>Spring session</b>			
ENGR 4036	Advanced Engineering Thesis 2: Detailed Investigations	10	
Select one Alternate Subject		10	
Select two electives		20	
	<b>Credit Points</b>	<b>40</b>	
	<b>Total Credit Points</b>	<b>320</b>	
<b>Alternate Subjects</b>			
<b>Subject</b>	<b>Title</b>	<b>Credit Points</b>	<b>Autumn session</b>
HLTH 2003	Biomechanics	10	MATH 1035 Mathematics for Engineers 2 (Advanced)
ENGR 3003	Biomedical Electronics	10	ELEC 1001 Digital Systems 1
ENGR 3004	Biomedical Signals and Data Analysis	10	ENGR 1047 Advanced Engineering Physics 1
MECH 4001	Computational Fluid Dynamics	10	ENGR 1045 Engineering Programming Fundamentals
MECH 4002	Computer Aided Engineering	10	
ELEC 2007	Engineering Visualization	10	
ENGR 2025	Design Graphics: Engineering Documentation	10	MECH 2005 Mathematics for Mechanical and Mechatronic Engineers
ENGR 2024	Design Graphics: Communication for Manufacture	10	ELEC 2009 Microprocessor Systems
CIVL 2003	Fluid Mechanics	10	ELEC 2008 Microcontrollers and PLCs
BIOS 1022	Introduction to Human Biology	10	One alternate subject
MECH 3007	Thermal and Fluid Engineering	10	
MECH 3008	Thermodynamics and Heat Transfer	10	
<b>Minors</b>			
SM3093 Computer Aided Design (Mechatronics)			
SM3074 Thermal and Fluid Systems			
SM3091 Biomedical Engineering			
<b>Optional Electives</b>			
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.			
<b>Subject</b>	<b>Title</b>	<b>Credit Points</b>	<b>Credit Points</b>
ENGR 3022	Special Technical Project	10	
<b>Equivalent Subjects</b>			
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			
<b>Replaced Subjects</b>			
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			
<b>Mid-year intake</b>			
<b>Course</b>	<b>Title</b>		<b>Credit Points</b>
<b>Year 1</b>			
<b>Spring session</b>			
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	
	<b>Credit Points</b>	<b>40</b>	
<b>Year 2</b>			
<b>Spring session</b>			
MECH 2005	Mathematics for Mechanical and Mechatronic Engineers	10	
ELEC 2009	Microprocessor Systems	10	
ELEC 2008	Microcontrollers and PLCs	10	
	<b>Credit Points</b>	<b>40</b>	
<b>Year 3</b>			
<b>Spring session</b>			
MECH 4003	Mobile Robotics	10	
MECH 3006	Mechatronic Design	10	
ELEC 3008	Instrumentation and Measurement	10	
From Spring 2022 ELEC 3008 is replaced with ELEC 4009 Instrumentation and Measurement			
One alternate subject			
	<b>Credit Points</b>	<b>40</b>	
<b>Autumn session</b>			
MECH 3001	Advanced Dynamics	10	
MECH 3005	Mechanical Design	10	
Select one elective		10	
One alternate subject		10	
	<b>Credit Points</b>	<b>40</b>	
<b>Autumn session</b>			
MECH 3001	Advanced Dynamics	10	
MECH 3005	Mechanical Design	10	
Select one elective		10	
One alternate subject		10	

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

**Alternate Subjects**

Subject	Title	Credit Points	Course	Title	Credit Points
<b>Year 1</b>					
<b>Autumn session</b>					
HLTH 2003	Biomechanics	10	ELEC 1006	Engineering Computing	10
ENGR 3003	Biomedical Electronics	10	ENGR 1011	Engineering Physics	10
ENGR 3004	Biomedical Signals and Data Analysis	10	ENGR 1024	Introduction to Engineering Practice	10
MECH 4001	Computational Fluid Dynamics	10	Select one of the following:		10
MECH 4002	Computer Aided Engineering	10	MATH 1021	Mathematics for Engineers Preliminary	
ELEC 2007	Engineering Visualization	10	MATH 1016	Mathematics for Engineers 1	
ENGR 2025	Design Graphics: Engineering Documentation	10	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.		
ENGR 2024	Design Graphics: Communication for Manufacture	10	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.		
CIVL 2003	Fluid Mechanics	10	The students who finish MATH 1021 Mathematics for Engineers Preliminary will then use this unit as an elective.		
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	Credit Points	40
ENGR 3022	Special Technical Project	10		
<b>Equivalent Subjects</b>				
The subjects listed below count towards completion of this program for students who passed these subjects in 2021 or earlier.				
Year 2			Credit Points	40
<b>Autumn session</b>				
MECH 2001	Kinematics and Kinetics of Machines	10		
MECH 2003	Mechanics of Materials	10		

ELEC 2001	Circuit Theory	10	<b>Year 2</b>	
ENGR 3029	Specialisation Workshop 1	10	<b>Spring session</b>	
	<b>Credit Points</b>	<b>40</b>	ENGR 2001	Automated Manufacturing
<b>Spring session</b>			ELEC 2008	Microcontrollers and PLCs
MECH 3004	Dynamics of Mechanical Systems	10	ENGR 3029	Specialisation Workshop 1
ENGR 2001	Automated Manufacturing	10	Select one elective	10
ELEC 2008	Microcontrollers and PLCs	10	• Elective unit must be Level 2 or higher	
ENGR 3030	Specialisation Workshop 2	10		
<b>Industrial Experience</b>				<b>Credit Points</b>
ENGR 2033	Industrial Experience (Engineering Technologist)	0		<b>40</b>
	<b>Credit Points</b>	<b>40</b>	<b>Autumn session</b>	
<b>Year 3</b>			MECH 2001	Kinematics and Kinetics of Machines
<b>Autumn session</b>			MECH 2003	Mechanics of Materials
MECH 3005	Mechanical Design	10	ELEC 2001	Circuit Theory
MECH 3001	Advanced Dynamics	10	ENGR 3030	Specialisation Workshop 2
ENGR 3013	Engineering Science Project 1	10	<b>Industrial Experience</b>	
ELEC 1001	Digital Systems 1	10	ENGR 2033	Industrial Experience (Engineering Technologist)
	<b>Credit Points</b>	<b>40</b>		<b>Credit Points</b>
<b>Spring session</b>				<b>40</b>
MECH 4003	Mobile Robotics	10	MECH 4003	Mobile Robotics
ENGR 3014	Engineering Science Project 2	10	ENGR 3014	Engineering Science Project 2
ELEC 2010	Power and Machines	10	ELEC 2010	Power and Machines
Select one elective		10	MECH 3004	Dynamics of Mechanical Systems
Note: Elective units must be level 2 or higher				<b>Credit Points</b>
	<b>Credit Points</b>	<b>40</b>		<b>40</b>
	<b>Total Credit Points</b>	<b>240</b>	<b>Autumn session</b>	
<b>Equivalent Subjects</b>			MECH 3005	Mechanical Design
The subjects listed below count towards completion of this program for students who passed these subjects in Autumn 2022 or earlier.			MECH 3001	Advanced Dynamics
ENGR 1008 - Engineering Materials, replaced by PROC 1008 - Introduction to Materials Engineering			ENGR 3013	Engineering Science Project 1
<b>Mid-year intake</b>			ELEC 1001	Digital Systems 1
Course	Title	Credit Points		<b>Credit Points</b>
<b>Year 1</b>				<b>40</b>
<b>Spring session</b>				<b>Total Credit Points</b>
Select one of the following:		10		<b>240</b>
MATH 1021	Mathematics for Engineers Preliminary		<b>Bachelor of Engineering (Honours)/ Bachelor of Business (3728)</b>	
MATH 1016	Mathematics for Engineers 1		Qualification for this award requires the successful completion of 400 credit points which include the subjects listed in the recommended sequences below.	
ENGR 1018	Fundamentals of Mechanics	10		
ELEC 1003	Electrical Fundamentals	10	<b>Start-year intake</b>	
ENGR 1024	Introduction to Engineering Practice	10	Course	Title
	<b>Credit Points</b>	<b>40</b>		Credit Points
<b>Autumn session</b>			<b>Year 1</b>	
Select one of the following:		10	MATH 1016	Mathematics for Engineers 1
MATH 1016	Mathematics for Engineers 1		ENGR 1011	Engineering Physics
MATH 1019	Mathematics for Engineers 2		BBus core unit 1	
ELEC 1006	Engineering Computing	10	BBus core unit 2	
ENGR 1011	Engineering Physics	10		<b>Credit Points</b>
Select one elective		10	<b>Spring session</b>	
• Elective unit must be Level 1 or higher			MATH 1019	Mathematics for Engineers 2
	<b>Credit Points</b>	<b>40</b>	PROC 1008	Introduction to Materials Engineering
			BBus core unit 3	
			BBus core unit 4	
				<b>Credit Points</b>
				<b>40</b>

<b>Year 2</b>		
<b>Autumn session</b>		
ELEC 1006	Engineering Computing	10
BBus Professional Subject 1		10
BBus Professional Subject 2		10
BBus Major Subject 1		10
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
ELEC 1003	Electrical Fundamentals	10
ENGR 1018	Fundamentals of Mechanics	10
BBus Major Subject 2		10
BBus Major Subject 3		10
	<b>Credit Points</b>	<b>40</b>
<b>Year 3</b>		
<b>Autumn session</b>		
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
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
MECH 3004	Dynamics of Mechanical Systems	10
ENGR 2001	Automated Manufacturing	10
ELEC 2010	Power and Machines	10
ELEC 2008	Microcontrollers and PLCs	10
	<b>Credit Points</b>	<b>40</b>
<b>Year 4</b>		
<b>Autumn session</b>		
MECH 3005	Mechanical Design	10
MECH 3001	Advanced Dynamics	10
ELEC 2004	Electronics	10
BBus Major Subject 4		10
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
MECH 4003	Mobile Robotics	10
BBus Major Subject 5		10
BBus Major Subject 6		10
BBus Major Subject 7		10
	<b>Credit Points</b>	<b>40</b>
<b>Industrial Experience</b>		
ENGR 3017	Industrial Experience (Engineering)	0
	<b>Credit Points</b>	<b>40</b>
<b>Year 5</b>		
<b>Autumn session</b>		
MECH 4004	Robotics	10
ENGR 4025	Final Year Project 1 (UG Engineering)	10
Business Professional Subject 3		10
Business Major Subject 8		10
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
ENGR 4026	Final Year Project 2 (UG Engineering)	10
ELEC 3008	Instrumentation and Measurement	10
From Spring 2022 ELEC 3008 is replaced with ELEC 4009 Instrumentation and Measurement		
MECH 3006	Mechatronic Design	10
	<b>Credit Points</b>	<b>40</b>
<b>Business Professional Subject 4</b>		<b>10</b>
	<b>Credit Points</b>	<b>40</b>
	<b>Total Credit Points</b>	<b>400</b>
<b>Equivalent Subjects</b>		
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		
<b>Replaced Subjects</b>		
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		
<b>Mid-year intake</b>		
<b>Course</b>	<b>Title</b>	<b>Credit Points</b>
<b>Year 1</b>		
<b>Spring session</b>		
MATH 1016	Mathematics for Engineers 1	10
PROC 1008	Introduction to Materials Engineering	10
BBus Core Subject 1		10
BBus Core Subject 2		10
	<b>Credit Points</b>	<b>40</b>
<b>Autumn session</b>		
MATH 1019	Mathematics for Engineers 2	10
ENGR 1011	Engineering Physics	10
BBus Core Subject 3		10
BBus Core Subject 4		10
	<b>Credit Points</b>	<b>40</b>
<b>Year 2</b>		
<b>Spring session</b>		
ELEC 1003	Electrical Fundamentals	10
ENGR 1018	Fundamentals of Mechanics	10
BBus Major Subject 1		10
BBus Major Subject 2		10
	<b>Credit Points</b>	<b>40</b>
<b>Autumn session</b>		
ELEC 1006	Engineering Computing	10
BBus Professional Subject 1		10
BBus Professional Subject 2		10
BBus Major Subject 3		10
	<b>Credit Points</b>	<b>40</b>
<b>Year 3</b>		
<b>Spring session</b>		
MECH 3004	Dynamics of Mechanical Systems	10
ENGR 2001	Automated Manufacturing	10
ELEC 2010	Power and Machines	10
ELEC 2008	Microcontrollers and PLCs	10
	<b>Credit Points</b>	<b>40</b>
<b>Autumn session</b>		
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	Select one elective	10
	<b>Credit Points</b>	<b>40</b>	• Elective unit must be Level 1 or higher	
<b>Year 4</b>				
<b>Spring session</b>				
MECH 4003	Mobile Robotics	10		
BBus Major Subject 4		10		
BBus Major Subject 5		10		
BBus Major Subject 6		10		
	<b>Credit Points</b>	<b>40</b>		
<b>Autumn session</b>				
MECH 3005	Mechanical Design	10		
MECH 3001	Advanced Dynamics	10		
ELEC 2004	Electronics	10		
BBus Major Subject 7		10		
<b>Industrial Experience</b>				
ENGR 3017	Industrial Experience (Engineering)	0		
	<b>Credit Points</b>	<b>40</b>		
<b>Year 5</b>				
<b>Spring session</b>				
ENGR 4025	Final Year Project 1 (UG Engineering)	10		
ELEC 3008	Instrumentation and Measurement	10		
From Spring 2022 ELEC 3008 is replaced with ELEC 4009				
Instrumentation and Measurement				
MECH 3006	Mechatronic Design	10		
Business Professional Subject 3		10		
	<b>Credit Points</b>	<b>40</b>		
<b>Autumn session</b>				
ENGR 4026	Final Year Project 2 (UG Engineering)	10		
MECH 4004	Robotics	10		
Business Professional Subject 4		10		
Business Major Subject 8		10		
	<b>Credit Points</b>	<b>40</b>		
	<b>Total Credit Points</b>	<b>400</b>		
<b>Year 3</b>				
<b>Autumn session</b>				
MECH 3005	Mechanical Design	10		
MECH 3001	Advanced Dynamics	10		
ELEC 2004	Electronics	10		
MECH 4003	Mobile Robotics	10		
	<b>Credit Points</b>	<b>40</b>		
<b>Spring session</b>				
MECH 3006	Mechatronic Design	10		
One alternate subject				10
Select one elective				10
One alternate subject				10
• Elective unit must be Level 2 or higher				
<b>Industrial Experience</b>				
ENGR 3017	Industrial Experience (Engineering)	0		
	<b>Credit Points</b>	<b>40</b>		
<b>Year 4</b>				
<b>Autumn session</b>				
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				
	<b>Credit Points</b>	<b>40</b>		
<b>Year 5</b>				
<b>Autumn session</b>				
MECH 4004	Robotics	10		
ENGR 4026	Final Year Project 2 (UG Engineering)	10		
One alternate subject				10
Select one elective				10
• Elective unit must be Level 2 or higher				
	<b>Credit Points</b>	<b>40</b>		
<b>Industrial Experience</b>				
ENGR 3017	Industrial Experience (Engineering)	0		
	<b>Credit Points</b>	<b>40</b>		

## 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.

### Start-year intake

Course	Title	Credit Points		
<b>Year 1</b>				
<b>Autumn session</b>				
Select one of the following:				
MATH 1021	Mathematics for Engineers Preliminary	10		
MATH 1016	Mathematics for Engineers 1			
ELEC 1006	Engineering Computing	10		
ENGR 1011	Engineering Physics	10		
ENGR 1024	Introduction to Engineering Practice	10		
	<b>Credit Points</b>	<b>40</b>		
<b>Spring session</b>				
Select one of the following:				
MATH 1016	Mathematics for Engineers 1	10		
MATH 1019	Mathematics for Engineers 2			
ENGR 1018	Fundamentals of Mechanics	10		
ELEC 1003	Electrical Fundamentals	10		
	<b>Credit Points</b>	<b>40</b>		
	<b>Total Credit Points</b>	<b>320</b>		

**Mid-year intake**

Course	Title	Credit Points	Select one elective	10
<b>Year 1</b>			• Elective unit must be Level 2 or higher	
<b>Spring session</b>				
Select one of the following:		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		
	<b>Credit Points</b>	<b>40</b>		
<b>Autumn session</b>				
Select one of the 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 must be Level 1 or higher				
	<b>Credit Points</b>	<b>40</b>		
<b>Year 2</b>				
<b>Spring session</b>				
ENGR 2001	Automated Manufacturing	10		
ELEC 2008	Microcontrollers and PLCs	10		
One alternate subject		10		
Select one elective		10		
• Elective unit must be Level 2 or higher				
	<b>Credit Points</b>	<b>40</b>		
<b>Autumn session</b>				
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		
	<b>Credit Points</b>	<b>40</b>		
<b>Year 3</b>				
<b>Spring session</b>				
MECH 3006	Mechatronic Design	10		
MECH 3004	Dynamics of Mechanical Systems	10		
ELEC 2010	Power and Machines	10		
One alternate subject		10		
	<b>Credit Points</b>	<b>40</b>		
<b>Autumn session</b>				
MECH 3005	Mechanical Design	10		
MECH 3001	Advanced Dynamics	10		
ELEC 2004	Electronics	10		
MECH 4003	Mobile Robotics	10		
<b>Industrial Experience</b>				
ENGR 3017	Industrial Experience (Engineering)	0		
	<b>Credit Points</b>	<b>40</b>		
<b>Year 4</b>				
<b>Spring session</b>				
MECH 4002	Computer Aided Engineering	10		
ENGR 4026	Final Year Project 2 (UG Engineering)	10		
One alternate subject		10		
	<b>Credit Points</b>	<b>40</b>		
<b>Year 1</b>				
<b>Autumn session</b>				
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				
	<b>Credit Points</b>	<b>40</b>		
<b>Autumn session</b>				
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				
	<b>Credit Points</b>	<b>40</b>		
<b>Total Credit Points</b>				<b>320</b>
<b>Equivalent Subjects</b>				
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				
<b>Major Structure 2024</b>				
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.				
<b>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.</b>				
Please follow the recommended sequence for your program as noted below.				
<b>Bachelor of Engineering Advanced (Honours) (3771)</b>				
Qualification for this award requires the successful completion of 320 credit points which include the subjects listed below.				
** Electives must be Level 2 or higher				
<b>Start-year intake</b>				
Course	Title	Credit Points		
<b>Year 1</b>				
<b>Autumn session</b>				
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		
	<b>Credit Points</b>	<b>40</b>		
<b>Spring session</b>				
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		
	<b>Credit Points</b>	<b>40</b>		
<b>Year 2</b>				
<b>Autumn session</b>				
ENGR 2035	Modern Digital Design and Development	10		
MECH 2003	Mechanics of Materials	10		
MECH 2001	Kinematics and Kinetics of Machines	10		

ELEC 1001		Digital Systems 1	10	Mid-year intake		Credit Points		
		Credit Points	40	Course	Title			
<b>Spring session</b>								
ELEC 2009	Microprocessor Systems	10	Year 1					
MECH 3004	Dynamics of Mechanical Systems	10	<b>Spring session</b>					
ENGR 2001	Automated Manufacturing	10	MATH 1034	Mathematics for Engineers 1 (Advanced)	10			
Select one elective** or Minor subject		10	ENGR 1018	Fundamentals of Mechanics	10			
Students who fail to maintain a minimum GPA of 5.0 at the end of completion of 160 Credit Points, and again at the completion of 200 Credit points will be automatically transferred to the B. Engineering (Honours) (3740) program.			ELEC 1003	Electrical Fundamentals	10			
			ENGR 2023	Advanced Engineering Physics 2	10			
			<b>Credit Points</b>		40			
<b>Year 3</b>		<b>Credit Points</b>	40	<b>Autumn session</b>				
<b>Autumn session</b>				MATH 1035	Mathematics for Engineers 2 (Advanced)	10		
MECH 3001	Advanced Dynamics	10		ELEC 1001	Digital Systems 1	10		
MECH 3005	Mechanical Design	10		ENGR 1047	Advanced Engineering Physics 1	10		
PROC 2003	Materials Selection and Design	10		ELEC 1006	Engineering Computing	10		
BUSM 2049	Creative and Innovative Thinkers	10		<b>Credit Points</b>		40		
<b>Spring session</b>		<b>Credit Points</b>	40	<b>Year 2</b>				
MECH 3006	Mechatronic Design	10		ELEC 2009	Microprocessor Systems	10		
ELEC 4009	Instrumentation and Measurement	10		ELEC 2008	Microcontrollers and PLCs	10		
ELEC 2008	Microcontrollers and PLCs	10		ENGR 2001	Automated Manufacturing	10		
Select one elective** or Minor subject		10		Select one elective** or Minor subject		10		
				<b>Credit Points</b>		40		
<b>Industrial Experience</b>				<b>Autumn session</b>				
ENGR 3017	Industrial Experience (Engineering)	0		ENGR 2035	Modern Digital Design and Development	10		
<b>Credit Points</b>		40		MECH 2003	Mechanics of Materials	10		
<b>Year 4</b>				ENGR 1024	Introduction to Engineering Practice	10		
<b>Autumn session</b>				MECH 2001	Kinematics and Kinetics of Machines	10		
ENGR 4043	Advanced Engineering Thesis 1: Preliminary Investigations	20	Students who fail to maintain a minimum GPA of 5.0 at the end of completion of 160 Credit Points, and again at the completion of 200 Credit points will be automatically transferred to the B. Engineering (Honours) (3740) program.					
MECH 4004	Robotics	10						
Select one elective** or minor subject		10		<b>Credit Points</b>		40		
<b>Spring session</b>		<b>Credit Points</b>	40	<b>Year 3</b>				
ENGR 4044	Advanced Engineering Thesis 2: Detailed Investigations	20		MECH 3006	Mechatronic Design	10		
MECH 4003	Mobile Robotics	10		Select one elective** or Minor subject		10		
Select one elective** or Minor subjecs		10		ELEC 4009	Instrumentation and Measurement	10		
<b>Credit Points</b>		40		MECH 3004	Dynamics of Mechanical Systems	10		
<b>Total Credit Points</b>		320		<b>Credit Points</b>		40		
<b>Optional Electives</b>								
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		<b>Autumn session</b>				
ENGR 3022	Special Technical Project	10		MECH 3001	Advanced Dynamics	10		
<b>Equivalent Subjects</b>								
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								
<b>Year 4</b>		<b>Credit Points</b>	40	<b>Industrial Experience</b>				
<b>Spring session</b>				ENGR 3017	Industrial Experience (Engineering)	0		
ENGR 4043	Advanced Engineering Thesis 1: Preliminary Investigations	20		<b>Credit Points</b>		40		
MECH 4003	Mobile Robotics	10		<b>Year 4</b>				
Select one elective** or Minor subject		10		<b>Spring session</b>				
				ENGR 4043	Advanced Engineering Thesis 1: Preliminary Investigations	20		
				MECH 4003	Mobile Robotics	10		
				Select one elective** or Minor subject		10		
				<b>Credit Points</b>		40		

**Autumn session**

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

**MATH 1019 Mathematics for Engineers 2**

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.

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

<b>Credit Points</b>	<b>40</b>
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**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
<b>Credit Points</b>	<b>40</b>	

**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
<b>Credit Points</b>	<b>40</b>	

**Industrial Experience**

ENGR 2033	Industrial Experience (Engineering Technologist)	0
<b>Credit Points</b>	<b>40</b>	

**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
<b>Credit Points</b>	<b>40</b>	

**Spring session**

MECH 4003	Mobile Robotics	10
ENGR 3014	Engineering Science Project 2	10
Select two electives		20
Note: Elective subjects must be level 2 or higher		
<b>Credit Points</b>	<b>40</b>	
<b>Total Credit Points</b>	<b>240</b>	

**Mid-year intake**

Course	Title	Credit Points
<b>Year 1</b>		
<b>Autumn session</b>		
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
ENGR 1024	Introduction to Engineering Practice	10
Select one of the following:		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.		
The students who finish MATH 1021 Mathematics for Engineers Preliminary will then use this unit as an elective.		
<b>Credit Points</b>	<b>40</b>	
<b>Spring session</b>		
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 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
<b>Credit Points</b>	<b>40</b>	
<b>Autumn session</b>		
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
ENGR 1024	Introduction to Engineering Practice	10
Select one of the following:		10
MATH 1016	Mathematics for Engineers 1	

MATH 1019	Mathematics for Engineers 2	BBus core subject 3	10			
	<b>Credit Points</b>	<b>40</b>	<b>Credit Points</b>	<b>40</b>		
<b>Year 2</b>						
<b>Spring session</b>						
ENGR 2001	Automated Manufacturing	10	ENGR 1024	Introduction to Engineering Practice	10	
ELEC 2008	Microcontrollers and PLCs	10	ELEC 1001	Digital Systems 1	10	
ENGR 3029	Specialisation Workshop 1	10	ENGR 1018	Fundamentals of Mechanics	10	
Select one elective		10	BBus Core Subject 4		10	
• Elective subject must be Level 2 or higher						
	<b>Credit Points</b>	<b>40</b>	<b>Credit Points</b>	<b>40</b>		
<b>Autumn session</b>						
MECH 2001	Kinematics and Kinetics of Machines	10	ENGR 2001	Automated Manufacturing	10	
MECH 2003	Mechanics of Materials	10	COMP 2023	Mathematical Programming	10	
ELEC 2001	Circuit Theory	10	BBus Professional Subject 1		10	
ENGR 3030	Specialisation Workshop 2	10	BBus Professional Subject 2		10	
<b>Industrial Experience</b>						
ENGR 2033	Industrial Experience (Engineering Technologist)	0	<b>Credit Points</b>		<b>40</b>	
	<b>Credit Points</b>	<b>40</b>	<b>Year 3</b>			
<b>Year 3</b>				<b>Autumn session</b>		
<b>Spring session</b>				MECH 2003	Mechanics of Materials	10
MECH 4003	Mobile Robotics	10	ELEC 1006	Engineering Computing	10	
ENGR 3013	Engineering Science Project 1	10	ELEC 2001	Circuit Theory	10	
MECH 3004	Dynamics of Mechanical Systems	10	MECH 2001	Kinematics and Kinetics of Machines	10	
Select one elective		10	<b>Credit Points</b>		<b>40</b>	
• Elective subject must be Level 2 or higher				<b>Spring session</b>		
	<b>Credit Points</b>	<b>40</b>	ELEC 2008	Microcontrollers and PLCs	10	
<b>Autumn session</b>				MECH 3004	Dynamics of Mechanical Systems	10
MECH 3005	Mechanical Design	10	BBus Major Subject 1		10	
MECH 3001	Advanced Dynamics	10	BBus Major Subject 2		10	
ENGR 3014	Engineering Science Project 2	10	<b>Credit Points</b>		<b>40</b>	
ELEC 1001	Digital Systems 1	10	<b>Year 4</b>			
	<b>Credit Points</b>	<b>40</b>	<b>Autumn session</b>			
Total Credit Points				MECH 3005	Mechanical Design	10
240				ELEC 2004	Electronics	10
				BBus Major Subject 3		10
				BBus Major Subject 4		10
				<b>Credit Points</b>		<b>40</b>
				<b>Spring session</b>		
				ELEC 4009	Instrumentation and Measurement	10
				ELEC 2010	Power and Machines	10
				BBus Major Subject 5		10
				BBus Major Subject 6		10
<b>Industrial Experience</b>				ENGR 3017	Industrial Experience (Engineering)	0
				<b>Credit Points</b>		<b>40</b>
				<b>Year 5</b>		
<b>Autumn session</b>				<b>Autumn session</b>		
MECH 4004	Robotics	10	MECH 4004	Robotics	10	
MECH 3001	Advanced Dynamics	10	MECH 3001	Advanced Dynamics	10	
BBus Major Subject 7		10	BBus Major Subject 7		10	
BBus Major Subject 8		10	BBus Major Subject 8		10	
				<b>Credit Points</b>		<b>40</b>
				<b>Spring session</b>		
				ENGR 4041	Final Year Project 1 (UG Engineering)	20
				MECH 3006	Mechatronic Design	10
				MECH 4003	Mobile Robotics	10
				<b>Credit Points</b>		<b>40</b>

## 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.

### Start-year intake

Course	Title	Credit Points
<b>Year 1</b>		
<b>Autumn session</b>		
ENGR 1011	Engineering Physics	10
MATH 1016	Mathematics for Engineers 1	10
BBus core subject 1		10
BBus core subject 2		10
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
PROC 1008	Introduction to Materials Engineering	10
MATH 1019	Mathematics for Engineers 2	10
ELEC 1003	Electrical Fundamentals	10
	<b>Credit Points</b>	<b>40</b>
<b>Year 5</b>		
<b>Autumn session</b>		
MECH 4004	Robotics	10
MECH 3001	Advanced Dynamics	10
BBus Major Subject 7		10
BBus Major Subject 8		10
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
ENGR 4041	Final Year Project 1 (UG Engineering)	20
MECH 3006	Mechatronic Design	10
MECH 4003	Mobile Robotics	10
	<b>Credit Points</b>	<b>40</b>

<b>Year 6</b>		BBus Major Subject 4		10		
<b>Autumn session</b>		<b>Credit Points</b>		40		
ENGR 4042	Final Year Project 2 (UG Engineering)	20	MECH 3005	Mechanical Design		
BBus Professional Subject 3		10	MECH 3001	Advanced Dynamics		
BBus Professional Subject 4		10	MECH 4004	Robotics		
<b>Credit Points</b>		<b>40</b>	BBus Major Subject 5	10		
<b>Total Credit Points</b>		<b>440</b>	<b>Industrial Experience</b>			
<b>Mid-year intake</b>		ENGR 3017 Industrial Experience (Engineering)		0		
<b>Course</b>	<b>Title</b>	<b>Credit Points</b>	<b>Credit Points</b>			
<b>Year 1</b>		<b>Year 5</b>				
<b>Spring session</b>		<b>Spring session</b>				
MATH 1016	Mathematics for Engineers 1	10	ELEC 4009	Instrumentation and Measurement		
ELEC 1003	Electrical Fundamentals	10	BBus Major Subject 6	10		
BBus Core Subject 1		10	BBus Major Subject 7	10		
BBus Core Subject 2		10	BBus Major Subject 8	10		
<b>Credit Points</b>		<b>40</b>	<b>Credit Points</b>			
<b>Autumn session</b>		<b>Credit Points</b>				
MATH 1019	Mathematics for Engineers 2	10	ENGR 4041	Final Year Project 1 (UG Engineering)		
ENGR 1011	Engineering Physics	10	BBus Professional Subject 3	10		
ENGR 1024	Introduction to Engineering Practice	10	BBus Professional Subject 4	10		
ENGR 1018	Fundamentals of Mechanics	10	<b>Credit Points</b>			
<b>Credit Points</b>		<b>40</b>	<b>Total Credit Points</b>			
<b>Year 2</b>		<b>Year 6</b>				
<b>Spring session</b>		<b>Spring session</b>				
PROC 1008	Introduction to Materials Engineering	10	ENGR 4042	Final Year Project 2 (UG Engineering)		
COMP 2023	Mathematical Programming	10	MECH 3006	Mechatronic Design		
BBus Core Subject 3		10	MECH 4003	Mobile Robotics		
BBus Core Subject 4		10	<b>Credit Points</b>			
<b>Credit Points</b>		<b>40</b>	<b>Total Credit Points</b>			
<b>Autumn session</b>		<b>Credit Points</b>				
MECH 2003	Mechanics of Materials	10	<b>Bachelor of Engineering (Honours) (3740)</b>			
ELEC 1006	Engineering Computing	10	Qualification for this award requires the successful completion of 320 credit points which include the subjects listed in the recommended sequences below.			
ELEC 1001	Digital Systems 1	10	** Electives must be Level 2 or higher (An exception applies for students completing MATH 1021 Mathematics for Engineers Preliminary. This subject will then count as one of the elective subjects)			
MECH 2001	Kinematics and Kinetics of Machines	10	<b>Start-year intake</b>			
<b>Credit Points</b>		<b>40</b>	<b>Course</b>	<b>Title</b>	<b>Credit Points</b>	
<b>Year 3</b>		<b>Year 1</b>				
<b>Spring session</b>		<b>Autumn session</b>				
MECH 3004	Dynamics of Mechanical Systems	10	ELEC 1006	Engineering Computing	10	
ENGR 2001	Automated Manufacturing	10	ENGR 1011	Engineering Physics	10	
BBus Professional Subject 1		10	ENGR 1024	Introduction to Engineering Practice	10	
BBus Professional Subject 2		10	Select one of the following:		10	
<b>Credit Points</b>		<b>40</b>	MATH 1021	Mathematics for Engineers Preliminary		
<b>Autumn session</b>		MATH 1016 Mathematics for Engineers 1				
MECH 2001	Kinematics and Kinetics of Machines	10	<b>Credit Points</b>			
ELEC 2004	Electronics	10	<b>Year 4</b>			
BBus Major Subject 1		10	<b>Spring session</b>			
BBus Major Subject 2		10	ELEC 2008	Microcontrollers and PLCs	10	
<b>Credit Points</b>		<b>40</b>	ELEC 2010	Power and Machines	10	
<b>Year 4</b>		BBus Major Subject 3				
<b>Spring session</b>		10	ENGR 1018	Fundamentals of Mechanics	10	
PROC 1008	Introduction to Materials Engineering	10	ELEC 1003	Electrical Fundamentals	10	
ELEC 2010	Power and Machines	10	Select one of the following:		10	
BBus Major Subject 3		10	PROG 1008	Introduction to Materials Engineering	10	

MATH 1016	Mathematics for Engineers 1		<b>Autumn session</b>	
MATH 1019	Mathematics for Engineers 2		ELEC 1006	Engineering Computing 10
	<b>Credit Points</b>	<b>40</b>	ENGR 1011	Engineering Physics 10
<b>Year 2</b>			ENGR 1024	Introduction to Engineering Practice 10
<b>Autumn session</b>			Select one of the following:	10
MECH 2001	Kinematics and Kinetics of Machines	10	MATH 1016	Mathematics for Engineers 1
MECH 2003	Mechanics of Materials	10	MATH 1019	Mathematics for Engineers 2
ELEC 2001	Circuit Theory	10		<b>Credit Points</b>
ELEC 1001	Digital Systems 1	10		<b>40</b>
	<b>Credit Points</b>	<b>40</b>	<b>Year 2</b>	
<b>Spring session</b>			<b>Spring session</b>	
MECH 3004	Dynamics of Mechanical Systems	10	ENGR 2001	Automated Manufacturing 10
ENGR 2001	Automated Manufacturing	10	COMP 2023	Mathematical Programming 10
COMP 2023	Mathematical Programming	10	ELEC 2008	Microcontrollers and PLCs 10
ELEC 2008	Microcontrollers and PLCs	10	Select one elective** or minor subject	10
	<b>Credit Points</b>	<b>40</b>		<b>Credit Points</b>
<b>Year 3</b>			<b>Autumn session</b>	
<b>Autumn session</b>			MECH 2001	Kinematics and Kinetics of Machines 10
MECH 3005	Mechanical Design	10	MECH 2003	Mechanics of Materials 10
MECH 3001	Advanced Dynamics	10	ELEC 2001	Circuit Theory 10
ELEC 2004	Electronics	10	ELEC 1001	Digital Systems 1 10
Select one elective** or minor subject		10		<b>Credit Points</b>
	<b>Credit Points</b>	<b>40</b>	<b>Year 3</b>	
<b>Spring session</b>			<b>Spring session</b>	
MECH 3006	Mechatronic Design	10	MECH 3006	Mechatronic Design 10
ELEC 2010	Power and Machines	10	MECH 3004	Dynamics of Mechanical Systems 10
MECH 4003	Mobile Robotics	10	ELEC 2010	Power and Machines 10
ELEC 4009	Instrumentation and Measurement	10	ELEC 4009	Instrumentation and Measurement 10
	<b>Credit Points</b>	<b>40</b>		<b>Credit Points</b>
<b>Industrial Experience</b>			<b>Autumn session</b>	
ENGR 3017	Industrial Experience (Engineering)	0	MECH 3005	Mechanical Design 10
	<b>Credit Points</b>	<b>40</b>	MECH 3001	Advanced Dynamics 10
<b>Year 4</b>			ELEC 2004	Electronics 10
<b>Autumn session</b>			Select one elective** or minor subject	10
MECH 4004	Robotics	10	<b>Industrial Experience</b>	
ENGR 4041	Final Year Project 1 (UG Engineering)	20	ENGR 3017	Industrial Experience (Engineering) 0
Select one elective** or minor subject		10		<b>Credit Points</b>
	<b>Credit Points</b>	<b>40</b>	<b>Year 4</b>	
<b>Spring session</b>			<b>Spring session</b>	
ENGR 4042	Final Year Project 2 (UG Engineering)	20	ENGR 4041	Final Year Project 1 (UG Engineering) 20
Select two electives** or minor subjects		20	MECH 4003	Mobile Robotics 10
	<b>Credit Points</b>	<b>40</b>	Select one elective** or minor subject	10
	<b>Total Credit Points</b>	<b>320</b>		<b>Credit Points</b>
<b>Mid-year intake</b>			<b>Autumn session</b>	
<b>Course</b>	<b>Title</b>		MECH 4004	Robotics 10
		<b>Credit Points</b>	ENGR 4042	Final Year Project 2 (UG Engineering) 20
<b>Year 1</b>			Select one elective** or minor subject	10
<b>Spring session</b>				<b>Credit Points</b>
ENGR 1018	Fundamentals of Mechanics	10		<b>40</b>
ELEC 1003	Electrical Fundamentals	10		<b>Total Credit Points</b>
PROC 1008	Introduction to Materials Engineering	10		<b>320</b>
Select one of the following:		10		
MATH 1021	Mathematics for Engineers Preliminary			
MATH 1016	Mathematics for Engineers 1			
	<b>Credit Points</b>	<b>40</b>		

## Related Programs

Bachelor of Engineering (Honours)/Bachelor of Business (3728) (<https://hbook.westernsydney.edu.au/archives/2023-2024/programs/bachelor-engineering-honours-bachelor-business/>)  
 Bachelor of Engineering (Honours) (3740) (<https://hbook.westernsydney.edu.au/archives/2023-2024/programs/bachelor-engineering-honours/>)

Bachelor of Engineering Advanced (Honours) (3771) (<https://hbook.westernsydney.edu.au/archives/2023-2024/programs/bachelor-engineering-advanced-honours/>)

Bachelor of Engineering Science (3691) (<https://hbook.westernsydney.edu.au/archives/2023-2024/programs/bachelor-engineering-science/>)