

MECHANICAL ENGINEERING, TESTAMUR MAJOR (T103)

Western Sydney University Major Code: T103

Previous Code: KT3173.1, MT3054

Available to students in other Western Sydney University programs?

No

Mechanical engineering is a dynamic area involving the design and build of moving machines including engines that power transportation, industrial machinery, and a range of tools. Students put the core concepts of mechanical engineering, energy, thermodynamics, mechanics, kinematics, and fluid mechanics, into practical application in workshops, industry projects, and work integrated learning. Students design and construct machines and tools, monitor and evaluate their performance. Employment opportunities include automotive or mechanical engineer, control and instrumentation engineer. This major includes a mandatory 12 weeks of industrial placement as a completion requirement.

Location

Campus	Mode	Advice	Credit Points
Parramatta City Campus - Macquarie Street	Internal	Major Advice (edbe@westernsydney.edu.au)	10
Parramatta Campus - Victoria Road	Internal	Major Advice (edbe@westernsydney.edu.au)	10
Penrith Campus	Internal	Major Advice (edbe@westernsydney.edu.au)	10
Sydney City Campus*	Internal	Major Advice (p.lendrum@city.westernsydney.edu.au)	10

* Curriculum delivered through an agreement with another party

Recommended Sequence 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 course 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	Credit Points
Year 1			
			Spring session
			MECH 4004 Robotics 10
			ENGR 4037 Advanced Engineering Thesis 1: Preliminary Investigations 10
			Select one Alternate Subject 20
			Select one elective 20
			Credit Points
			40
			Autumn session
			MECH 4002 Computer Aided Engineering 10
			ENGR 4036 Advanced Engineering Thesis 2: Detailed Investigations 10
			Select one Alternate Subject 20
			Credit Points
			40

Autumn session

MATH 1034	Mathematics for Engineers 1 (Advanced)	10
ENGR 1024	Introduction to Engineering Practice	10

Select one elective		ENGR 1024	Introduction to Engineering Practice	10
Credit Points		40	ENGR 1047	Advanced Engineering Physics 1
Total Credit Points		320	ENGR 1045	Engineering Programming Fundamentals
				Credit Points
				40
Alternate Subjects				
Subject	Title	Credit Points	Spring session	
ENGR 3025	Designing for Circular Economy (Advanced)	10	MECH 2005	Mathematics for Mechanical and Mechatronic Engineers
ENGR 2024	Design Graphics: Communication for Manufacture	10	MECH 3008	Thermodynamics and Heat Transfer
ENGR 2022	Design Practice: Sustainable Manufacturing	10	ENGR 2025	Design Graphics: Engineering Documentation
MECH 4003	Mobile Robotics	10	Select one elective	
INFO 3003	Human-Computer Interaction	10		Credit Points
HLTH 2003	Biomechanics	10		40
ENGR 3003	Biomedical Electronics	10	Autumn session	
ENGR 3004	Biomedical Signals and Data Analysis	10	ENGR 2027	Engineering Design
MECH 4001	Computational Fluid Dynamics	10	MECH 2003	Mechanics of Materials
BIOS 1022	Introduction to Human Biology	10	MECH 2001	Kinematics and Kinetics of Machines
MECH 4003	Mobile Robotics	10	CIVL 2003	Fluid Mechanics
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.				
				Credit Points
Minors				
SM3072 Automation				
				Credit Points
SM3091 Biomedical Engineering				
SM3099 Computer Aided Design (Mechanical)				
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	Spring session	
ENGR 3022	Special Technical Project	10	MECH 3007	Thermal and Fluid Engineering
				10
				MECH 3006
				Mechatronic Design
				10
				ENGR 3020
				Numerical Methods in Engineering
				10
				One alternate subject
				Credit Points
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				
Mid-year intake				
Course	Title	Credit Points	Autumn session	
Year 1				
Spring session				
MATH 1034	Mathematics for Engineers 1 (Advanced)	10	ENGR 4036	Advanced Engineering Thesis 2: Detailed Investigations
ENGR 1018	Fundamentals of Mechanics	10	MECH 4004	Robotics
MANU 2001	Design and Manufacturing	10	One alternate subject	
ELEC 1009	Electrical Circuit Fundamentals	10	Select one elective	
				Credit Points
				40
Autumn session				
MATH 1035	Mathematics for Engineers 2 (Advanced)	10	Total Credit Points	
				320
Alternate Subjects				

Subject	Title	Credit Points	MATH 1016	Mathematics for Engineers 1	
ENGR 3025	Designing for Circular Economy (Advanced)	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.		
ENGR 2022	Design Practice: Sustainable Manufacturing	10			
MECH 4003	Mobile Robotics	10			
INFO 3003	Human-Computer Interaction	10			
HLTH 2003	Biomechanics	10			
ENGR 3003	Biomedical Electronics	10			
ENGR 3004	Biomedical Signals and Data Analysis	10			
MECH 4001	Computational Fluid Dynamics	10			
BIOS 1022	Introduction to Human Biology	10			
MECH 4003	Mobile Robotics	10			
Minors					
SM3072	Automation				
SM3091	Biomedical Engineering				
SM3099	Computer Aided Design (Mechanical)				
Optional Electives					
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ENGR 3022	Special Technical Project	10			
Equivalent Subjects					
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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					
Bachelor of Engineering Science					
This Major will be offered at Engineering Innovation Hub which is part of Parramatta City campus, Penrith and Sydney City 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					
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 following:					
MATH 1021	Mathematics for Engineers Preliminary				
Year 2					
Autumn session					
MECH 2001	Kinematics and Kinetics of Machines	10			
MECH 2003	Mechanics of Materials	10			
CIVL 2003	Fluid Mechanics	10			
ENGR 3029	Specialisation Workshop 1	10			
Spring session					
MECH 3004	Dynamics of Mechanical Systems	10			
ENGR 2001	Automated Manufacturing	10			
MECH 3008	Thermodynamics and Heat Transfer	10			
ENGR 3030	Specialisation Workshop 2	10			
Year 3					
Autumn session					
MECH 3005	Mechanical Design	10			
MECH 3001	Advanced Dynamics	10			
ENGR 3013	Engineering Science Project 1	10			
ENGR 2024	Design Graphics: Communication for Manufacture	10			
Spring session					
MECH 3007	Thermal and Fluid Engineering	10			
ENGR 3020	Numerical Methods in Engineering	10			
ENGR 3014	Engineering Science Project 2	10			
Select one elective					
Industrial Experience					
ENGR 2033	Industrial Experience (Engineering Technologist)	0			

Note: Elective subjects must be level 2 or higher

Credit Points	40
Total Credit Points	240

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 following:		
MATH 1021	Mathematics for Engineers Preliminary	10
MATH 1016	Mathematics for Engineers 1	10
ENGR 1018	Fundamentals of Mechanics	10
PROC 1008	Introduction to Materials Engineering	10
ENGR 1024	Introduction to Engineering Practice	10
	Credit Points	40
Autumn session		
Select one of the following:		
MATH 1016	Mathematics for Engineers 1	10
MATH 1019	Mathematics for Engineers 2	10
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
Select one elective		10
• Elective must be Level 1 or higher		
	Credit Points	40

Year 2	Credit Points	40
Spring session		
ENGR 2001 Automated Manufacturing		
MECH 3008 Thermodynamics and Heat Transfer		
ENGR 3029 Specialisation Workshop 1		10
Select one elective		10
• Elective must be Level 2 or higher		
	Credit Points	40

Autumn session	Credit Points	40
MECH 2001 Kinematics and Kinetics of Machines		
MECH 2003 Mechanics of Materials		
CIVL 2003 Fluid Mechanics		
ENGR 3030 Specialisation Workshop 2		10
Industrial Experience		
ENGR 2033 Industrial Experience (Engineering Technologist)		0
	Credit Points	40

Year 3	Credit Points	40
Spring session		
MECH 3007 Thermal and Fluid Engineering		
ENGR 3020 Numerical Methods in Engineering		
ENGR 3014 Engineering Science Project 2		
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
ENGR 2024	Design Graphics: Communication for Manufacture	10
Credit Points		40
Total Credit Points		240

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

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 sequence below.

Start-year intake

Course	Title	Credit Points
Year 1		
Autumn session		
ENGR 1011 Engineering Physics		
Business Core Subject 1		10
Business Core Subject 2		10
MATH 1016 Mathematics for Engineers 1		10
	Credit Points	40

Spring session

PROC 1008 Introduction to Materials Engineering	10
Business Core Subject 3	10
Business Core Subject 4	10
MATH 1019 Mathematics for Engineers 2	10
	Credit Points

Year 2

Autumn session	Credit Points	40
ELEC 1006 Engineering Computing		
Business Professional Subject 1		
Business Professional Subject 2		
Business Major Subject 1		10
	Credit Points	40

Spring session

ELEC 1003 Electrical Fundamentals	10
ENGR 1018 Fundamentals of Mechanics	10
Business Major Subject 2	10
Business Major Subject 3	10
	Credit Points

Year 3

Autumn session	Credit Points	40
MECH 2001 Kinematics and Kinetics of Machines		
MECH 2003 Mechanics of Materials		
CIVL 2003 Fluid Mechanics		
Business Major Subject 1		10
	Credit Points	40

ENGR 2024	Design Graphics: Communication for Manufacture	10	ENGR 1011	Engineering Physics	10
	Credit Points	40	Business Core Subject 3		10
Spring session			Business Core Subject 4		10
MECH 3004	Dynamics of Mechanical Systems	10		Credit Points	40
ENGR 2001	Automated Manufacturing	10	Year 2		
MECH 3008	Thermodynamics and Heat Transfer	10	Spring session		
MECH 3002	Advanced Mechanics of Materials	10	ELEC 1003	Electrical Fundamentals	10
	Credit Points	40	ENGR 1018	Fundamentals of Mechanics	10
Year 4			Business Major Subject 1		10
Autumn session			Business Major Subject 2		10
MECH 3005	Mechanical Design	10		Credit Points	40
MECH 3001	Advanced Dynamics	10	Autumn session		
Business Major Subject 4		10	ELEC 1006	Engineering Computing	10
Business Major Subject 5		10	MECH 2003	Mechanics of Materials	10
	Credit Points	40	Business Professional Subject 1		10
Spring session			Business Major Subject 3		10
MECH 3007	Thermal and Fluid Engineering	10		Credit Points	40
ENGR 3020	Numerical Methods in Engineering	10	Year 3		
Business Major Subject 6		10	Spring session		
Business Major Subject 7		10	ENGR 2001	Automated Manufacturing	10
Industrial Experience			MECH 3008	Thermodynamics and Heat Transfer	10
ENGR 3017	Industrial Experience (Engineering)	0	MECH 3002	Advanced Mechanics of Materials	10
	Credit Points	40	Business Major Subject 4		10
Year 5				Credit Points	40
Autumn session			Autumn session		
MECH 4004	Robotics	10	MECH 2001	Kinematics and Kinetics of Machines	10
ENGR 4025	Final Year Project 1 (UG Engineering)	10	CIVL 2003	Fluid Mechanics	10
Business Professional Subject 3		10	ENGR 2024	Design Graphics: Communication for Manufacture	10
Business Major Subject 8		10	Business Professional Subject 2		10
	Credit Points	40		Credit Points	40
Spring session			Year 4		
MECH 4002	Computer Aided Engineering	10	Spring session		
ENGR 4026	Final Year Project 2 (UG Engineering)	10	MECH 3007	Thermal and Fluid Engineering	10
MECH 3006	Mechatronic Design	10	ENGR 3020	Numerical Methods in Engineering	10
Business Professional Subject 4		10	MECH 3004	Dynamics of Mechanical Systems	10
	Credit Points	40	Business Major Subject 5		10
	Total Credit Points	400		Credit Points	40
Equivalent Subjects			Autumn session		
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			MECH 3005	Mechanical Design	10
Course	Title	Credit Points	MECH 3001	Advanced Dynamics	10
Year 1			Business Major Subject 6		10
Spring session			Business Major Subject 7		10
PROC 1008	Introduction to Materials Engineering	10	Industrial Experience		
MATH 1016	Mathematics for Engineers 1	10	ENGR 3017	Industrial Experience (Engineering)	0
Business Core Subject 1		10		Credit Points	40
Business Core Subject 2		10	Year 5		
	Credit Points	40	Spring session		
Autumn session			MECH 4002	Computer Aided Engineering	10
MATH 1019	Mathematics for Engineers 2	10	ENGR 4025	Final Year Project 1 (UG Engineering)	10
			MECH 3006	Mechatronic Design	10
			Business Professional Subject 3		10
	Credit Points	40		Credit Points	40
Autumn session			Autumn session		
			ENGR 4026	Final Year Project 2 (UG Engineering)	10
			MECH 4004	Robotics	10

Business Professional Subject 4	10	MECH 3001	Advanced Dynamics	10
Business Major Subject 8	10	One alternate subject		10
Credit Points	40	Select one elective		10
Total Credit Points	400	• Elective must be Level 2 or higher		

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

Bachelor of Engineering (Honours)

This Major will be offered at Engineering Innovation Hub which is part of Parramatta City campus, Penrith and Sydney City campuses.

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

Start-year intake

Course	Title	Credit Points	Credit Points	40		
Year 1						
Autumn session						
Select one of the following:						
MATH 1021	Mathematics for Engineers Preliminary	10	MECH 4004	Robotics		
MATH 1016	Mathematics for Engineers 1	10	ENGR 4025	Final Year Project 1 (UG Engineering)		
ELEC 1006	Engineering Computing	10	One alternate subject	10		
ENGR 1011	Engineering Physics	10	Select one elective	10		
ENGR 1024	Introduction to Engineering Practice	10	• Elective must be Level 2 or higher			
Credit Points		40	Credit Points			
Spring session						
Select one of the following:						
MATH 1016	Mathematics for Engineers 1	10	MECH 4002	Computer Aided Engineering		
MATH 1019	Mathematics for Engineers 2	10	ENGR 4026	Final Year Project 2 (UG Engineering)		
ENGR 1018	Fundamentals of Mechanics	10	One alternate subject	10		
PROC 1008	Introduction to Materials Engineering	10	Select one elective	10		
Select one elective		10	• Elective must be Level 2 or higher			
Credit Points		40	Credit Points			
Total 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 2		
Autumn session		
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
CIVL 2003	Fluid Mechanics	10
ENGR 2025	Design Graphics: Engineering Documentation	10
Credit Points		40
Spring session		
MECH 3004	Dynamics of Mechanical Systems	10
ENGR 2001	Automated Manufacturing	10
MECH 3008	Thermodynamics and Heat Transfer	10
MECH 2003	Mechanics of Materials	10
Credit Points		40
Year 3		
Autumn session		
MECH 3005	Mechanical Design	10
Credit Points		40
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		
Autumn session		
Select one of the following:		
MATH 1016	Mathematics for Engineers 1	10
MATH 1019	Mathematics for Engineers 2	10
ELEC 1006	Engineering Computing	10
ENGR 1011	Engineering Physics	10
Select one elective		10

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MECH 2001	Kinematics and Kinetics of Machines	10																																																																																			
CIVL 2003	Fluid Mechanics	10																																																																																			
Credit Points		40																																																																																			
Spring session																																																																																					
MECH 3008	Thermodynamics and Heat Transfer	10																																																																																			
ENGR 2025	Design Graphics: Engineering Documentation	10																																																																																			
ENGR 2001	Automated Manufacturing	10																																																																																			
Select one elective** or Minor subject		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.																																																																																					
			Credit Points																																																																																		
			40																																																																																		

Year 3				
Autumn session				
PROC 2003	Materials Selection and Design	10	ENGR 1024	Introduction to Engineering Practice 10
MECH 3005	Mechanical Design	10	ENGR 1047	Advanced Engineering Physics 1 10
BUSM 2049	Creative and Innovative Thinkers	10	ELEC 1006	Engineering Computing 10
Select one elective** or Minor subject		10		Credit Points 40
	Credit Points	40		
Spring session				
MECH 3007	Thermal and Fluid Engineering	10	MECH 3008	Thermodynamics and Heat Transfer 10
MECH 3006	Mechatronic Design	10	ENGR 2025	Design Graphics: Engineering Documentation 10
MECH 3004	Dynamics of Mechanical Systems	10	ENGR 2001	Automated Manufacturing 10
MECH 3002	Advanced Mechanics of Materials	10	Select one elective** or Minor subject	10
				Credit Points 40
Industrial Experience				
ENGR 3017	Industrial Experience (Engineering)	0	ENGR 2025	Design Graphics: Engineering Documentation 10
	Credit Points	40		
Year 4				
Autumn session				
ENGR 4043	Advanced Engineering Thesis 1: Preliminary Investigations	20	MECH 2003	Mechanics of Materials 10
MECH 4004	Robotics	10	MECH 2001	Kinematics and Kinetics of Machines 10
Select one elective** or Minor subject		10	CIVL 2003	Fluid Mechanics 10
	Credit Points	40	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.	
				Credit Points 40
Spring session				
ENGR 4044	Advanced Engineering Thesis 2: Detailed Investigations	20	MECH 3007	Thermal and Fluid Engineering 10
MECH 4002	Computer Aided Engineering	10	MECH 3006	Mechatronic Design 10
Select one elective** or Minor subject		10	MECH 3004	Dynamics of Mechanical Systems 10
	Credit Points	40	MECH 3002	Advanced Mechanics of Materials 10
	Total Credit Points	320		Credit Points 40
Subject	Title	Credit Points	Autumn session	
Optional Electives			PROC 2003	Materials Selection and Design 10
The following subject is an optional elective subject offered to students who are engaged in a School approved project.			MECH 3005	Mechanical Design 10
This subject can be taken during the third year of this program, however, permission is required to enrol in the subject.			BUSM 2049	Creative and Innovative Thinkers 10
ENGR 3022	Special Technical Project	10	Select one elective** or Minor subject	10
Equivalent Subjects			Industrial Experience	
The subjects listed below count towards completion of this program for students who passed these subjects in 2023 or earlier.			ENGR 3017	Industrial Experience (Engineering) 0
BUSM 2047 Venture Makers Foundations, replaced by BUSM 2049 Creative and Innovative Thinkers				Credit Points 40
Mid-year intake			Year 4	
Course	Title	Credit Points	Spring session	
Year 1			ENGR 4043	Advanced Engineering Thesis 1: Preliminary Investigations 20
Spring session			MECH 4002	Computer Aided Engineering 10
MATH 1034	Mathematics for Engineers 1 (Advanced)	10	Select one elective** or Minor subject	10
ENGR 1018	Fundamentals of Mechanics	10		Credit Points 40
ELEC 1003	Electrical Fundamentals	10		Total Credit Points 320
ENGR 2023	Advanced Engineering Physics 2	10		
	Credit Points	40		
Autumn session				
MATH 1035	Mathematics for Engineers 2 (Advanced)	10		

Subject	Title	Credit Points	MECH 3002	Advanced Mechanics of Materials	10
Optional Electives			Credit Points		40
The following subject is an optional elective subject offered to students who are engaged in a School approved project.			Year 3		
This subject can be taken during the third year of this program, however, permission is required to enrol in the subject.			Autumn session		
ENGR 3022	Special Technical Project	10	MECH 3005	Mechanical Design	10
Equivalent Subjects			MECH 3001	Advanced Dynamics	10
The subjects listed below count towards completion of this program for students who passed these subjects in 2023 or earlier.			PROC 2003	Materials Selection and Design	10
BUSM 2047 Venture Makers Foundations, replaced by BUSM 2049 Creative and Innovative Thinkers			Select one elective** or Minor subject		10
<h2>Bachelor of Engineering (Honours) (3740)</h2> <p>This Major will be offered at Engineering Innovation Hub which is part of Parramatta City campus, Penrith and Sydney City campuses.</p> <p>Qualification for this award requires the successful completion of 320 credit points which include the subjects listed below.</p> <p>** 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)</p>					
Course	Title	Credit Points	Industrial Experience		
Year 1			ENGR 3017	Industrial Experience (Engineering)	0
Autumn session			Credit Points		40
ELEC 1006	Engineering Computing	10	MECH 3007	Thermal and Fluid Engineering	10
ENGR 1011	Engineering Physics	10	MECH 4002	Computer Aided Engineering	10
ENGR 1024	Introduction to Engineering Practice	10	MECH 3006	Mechatronic Design	10
Select one of the following		10	Select one elective** or Minor subject		10
MATH 1021	Mathematics for Engineers Preliminary		Credit Points		40
MATH 1016	Mathematics for Engineers 1		Year 4		
Spring session			ENGR 4042	Final Year Project 2 (UG Engineering)	20
ENGR 1018	Fundamentals of Mechanics	10	Select one elective** or Minor subject		10
PROC 1008	Introduction to Materials Engineering	10	Select one elective** or Minor subject		10
ELEC 1003	Electrical Fundamentals	10	Credit Points		40
Select one of the following		10	Autumn session		
MATH 1016	Mathematics for Engineers 1		ENGR 4041	Final Year Project 1 (UG Engineering)	20
MATH 1019	Mathematics for Engineers 2		Credit Points		40
Mid-year intake			Total Credit Points		320
Course	Title	Credit Points	Spring session		
Year 1			ENGR 4042	Final Year Project 2 (UG Engineering)	20
Autumn session			Select one elective** or Minor subject		10
ELEC 1006	Engineering Computing	10	Select one elective** or Minor subject		10
ENGR 1011	Engineering Physics	10	Credit Points		40
ENGR 1024	Introduction to Engineering Practice	10	Total Credit Points		320
Select one of the following		10	Mid-year intake		
MATH 1021	Mathematics for Engineers Preliminary		Spring session		
MATH 1016	Mathematics for Engineers 1		ENGR 1018	Fundamentals of Mechanics	10
Spring session			PROC 1008	Introduction to Materials Engineering	10
ENGR 1018	Fundamentals of Mechanics	10	ELEC 1003	Electrical Fundamentals	10
PROC 1008	Introduction to Materials Engineering	10	Select one of the following		10
ELEC 1003	Electrical Fundamentals	10	MATH 1016	Mathematics for Engineers 1	
Select one of the following		10	MATH 1019	Mathematics for Engineers 2	
MATH 1016	Mathematics for Engineers 1		Credit Points		40
MATH 1019	Mathematics for Engineers 2		Autumn session		
Year 2			ELEC 1006	Engineering Computing	10
Autumn session			ENGR 1011	Engineering Physics	10
MECH 2001	Kinematics and Kinetics of Machines	10	ENGR 1024	Introduction to Engineering Practice	10
MECH 2003	Mechanics of Materials	10	Select one of the following		10
CIVL 2003	Fluid Mechanics	10	MATH 1021	Mathematics for Engineers Preliminary	
ENGR 2035	Modern Digital Design and Development	10	MATH 1016	Mathematics for Engineers 1	
Spring session			Credit Points		40
MECH 3004	Dynamics of Mechanical Systems	10	Year 2		
ENGR 2001	Automated Manufacturing	10	Spring session		
MECH 3008	Thermodynamics and Heat Transfer	10	ENGR 2001	Automated Manufacturing	10

Select one elective or Minor subject	10	Spring session	
Credit Points	40	ENGR 1018	Fundamentals of Mechanics
Autumn session		PROC 1008	Introduction to Materials Engineering
MECH 2001	10	ELEC 1003	Electrical Fundamentals
MECH 2003	10	Select one of the following	10
CIVL 2003	10	MATH 1016	Mathematics for Engineers 1
ENGR 2035	10	MATH 1019	Mathematics for Engineers 2
Credit Points	40	Credit Points	40
Year 3		Year 2	
Spring session		Autumn session	
MECH 3007	10	MECH 2001	Kinematics and Kinetics of Machines
MECH 3002	10	MECH 2003	Mechanics of Materials
MECH 4002	10	CIVL 2003	Fluid Mechanics
MECH 3004	10	ENGR 3029	Specialisation Workshop 1
Credit Points	40	Credit Points	40
Autumn session		Spring session	
MECH 3005	10	MECH 3004	Dynamics of Mechanical Systems
MECH 3001	10	ENGR 2001	Automated Manufacturing
PROC 2003	10	MECH 3008	Thermodynamics and Heat Transfer
MECH 4001	10	ENGR 3030	Specialisation Workshop 2
Industrial Experience		Industrial Experience	
ENGR 3017	0	ENGR 2033	Industrial Experience (Engineering Technologist)
Credit Points	40	Credit Points	40
Year 4		Year 3	
Spring session		Autumn session	
MECH 3006	10	MECH 3005	Mechatronic Design
ENGR 4041	20	MECH 3001	Final Year Project 1 (UG Engineering)
Select one elective or Minor subject	10	ENGR 3013	Advanced Dynamics
Credit Points	40	ENGR 2035	Engineering Science Project 1
Autumn session		Credit Points	40
MECH 4004	10	MECH 3007	Modern Digital Design and Development
ENGR 4042	20	ENGR 3014	Robotics
Select one elective or Minor subject	10	Select two electives (Level 2 or higher)	10
Credit Points	40	Credit Points	40
Total Credit Points	320	Total Credit Points	240

Bachelor of Engineering Science

This Major will be offered at Engineering Innovation Hub which is part of Parramatta City campus, Penrith and Sydney City 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 1018	Fundamentals of Mechanics	10
ENGR 1011	Engineering Physics	10	PROC 1008	Introduction to Materials Engineering	10
ENGR 1024	Introduction to Engineering Practice	10	ELEC 1003	Electrical Fundamentals	10
Select one of the following		10	Select one of the following		10
MATH 1021	Mathematics for Engineers Preliminary		MATH 1016	Mathematics for Engineers 1	
MATH 1016	Mathematics for Engineers 1		MATH 1019	Mathematics for Engineers 2	
Credit Points	40		Credit Points	40	
Autumn session			Autumn session		
ELEC 1006	Engineering Computing		ENGR 1011	Engineering Physics	
ENGR 1011	Engineering Physics		ENGR 1024	Introduction to Engineering Practice	
ENGR 1024	Introduction to Engineering Practice		Select one of the following		10
Select one of the following		10	MATH 1021	Mathematics for Engineers Preliminary	
MATH 1021	Mathematics for Engineers Preliminary		MATH 1016	Mathematics for Engineers 1	

MATH 1016	Mathematics for Engineers 1		Year 2
	Credit Points	40	Autumn session
Year 2			MECH 2003 Mechanics of Materials 10
Spring session			ENGR 1024 Introduction to Engineering Practice 10
ENGR 2001	Automated Manufacturing	10	MECH 3008 Thermodynamics and Heat Transfer 10
MECH 3008	Thermodynamics and Heat Transfer	10	Business Core Subject 4 10
ENGR 3029	Specialisation Workshop 1	10	
Select one elective (Level 2 or higher)		10	Credit Points 40
	Credit Points	40	Spring session
Autumn session			ENGR 2001 Automated Manufacturing 10
MECH 2001	Kinematics and Kinetics of Machines	10	MECH 3002 Advanced Mechanics of Materials 10
MECH 2003	Mechanics of Materials	10	Business Professional Subject 1 10
CIVL 2003	Fluid Mechanics	10	Business Professional Subject 2 10
ENGR 3030	Specialisation Workshop 2	10	
Industrial Experience			Credit Points 40
ENGR 2033	Industrial Experience (Engineering Technologist)	0	Year 3
	Credit Points	40	Autumn session
Year 3			MECH 2001 Kinematics and Kinetics of Machines 10
Spring session			ELEC 1006 Engineering Computing 10
MECH 3007	Thermal and Fluid Engineering	10	CIVL 2003 Fluid Mechanics 10
MECH 4002	Computer Aided Engineering	10	ENGR 2035 Modern Digital Design and Development 10
ENGR 3013	Engineering Science Project 1	10	
MECH 3004	Dynamics of Mechanical Systems	10	Credit Points 40
	Credit Points	40	Spring session
Autumn session			MECH 3007 Thermal and Fluid Engineering 10
MECH 3005	Mechanical Design	10	MECH 3004 Dynamics of Mechanical Systems 10
MECH 3001	Advanced Dynamics	10	Business Major Subject 1 10
ENGR 3014	Engineering Science Project 2	10	Business Major Subject 2 10
ENGR 2035	Modern Digital Design and Development	10	
	Credit Points	40	Credit Points 40
	Total Credit Points	240	Year 4
			Autumn session
			ELEC 1003 Electrical Fundamentals 10
			MECH 3001 Advanced Dynamics 10
			Business Major Subject 3 10
			Business Major Subject 4 10
			Credit Points 40
			Spring session
			MECH 3006 Mechatronic Design 10
			MECH 4002 Computer Aided Engineering 10
			Business Major Subject 5 10
			Business Major Subject 6 10
			Industrial Experience
			ENGR 3017 Industrial Experience (Engineering) 0
			Credit Points 40
			Year 5
			Autumn session
			MECH 3005 Mechanical Design 10
			PROC 2003 Materials Selection and Design 10
			Business Major Subject 7 10
			Business Major Subject 8 10
			Credit Points 40
			Spring session
			ENGR 4041 Final Year Project 1 (UG Engineering) 20
			Business Professional Subject 3 10
			Business Professional Subject 4 10
			Credit Points 40
			Year 6
			Autumn session
			ENGR 4042 Final Year Project 2 (UG Engineering) 20

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 sequence below.

Start-year intake

Course	Title	Credit Points	
Year 1			
Autumn session			
ENGR 1011	Engineering Physics	10	
MATH 1016	Mathematics for Engineers 1	10	
Business Core Subject 1		10	
Business Core Subject 2		10	
	Credit Points	40	
Spring session			
PROC 1008	Introduction to Materials Engineering	10	
ENGR 1018	Fundamentals of Mechanics	10	
MATH 1019	Mathematics for Engineers 2	10	
Business Core Subject 3		10	
	Credit Points	40	
			Autumn session
			ENGR 4042 Final Year Project 2 (UG Engineering) 20

MECH 4004	Robotics	10	MECH 3005	Mechanical Design	10
MECH 4001	Computational Fluid Dynamics	10	MECH 3001	Advanced Dynamics	10
Credit Points	40		Business Major Subject 5		10
	Total Credit Points	440	Industrial Experience		
			ENGR 3017	Industrial Experience (Engineering)	0
				Credit Points	40

Mid-year intake

Course	Title	Credit Points	Year 5		
Year 1			Spring session		
Spring session			MECH 4002	Computer Aided Engineering	10
MATH 1016	Mathematics for Engineers 1	10	Business Professional Subject 6		10
ENGR 1018	Fundamentals of Mechanics	10	Business Professional Subject 7		10
Business Core Subject 1		10	Business Professional Subject 8		10
Business Core Subject 2		10		Credit Points	40
	Credit Points	40	Autumn session		
Autumn session			MECH 4004	Robotics	10
MATH 1019	Mathematics for Engineers 2	10	MECH 4001	Computational Fluid Dynamics	10
ENGR 1011	Engineering Physics	10	ENGR 4041	Final Year Project 1 (UG Engineering)	20
ELEC 1006	Engineering Computing	10		Credit Points	40
ELEC 1003	Electrical Fundamentals	10	Year 6		
	Credit Points	40	Spring session		
Year 2			ENGR 4042	Final Year Project 2 (UG Engineering)	20
Spring session			Business Professional Subject 3		10
ENGR 2001	Automated Manufacturing	10	Business Professional Subject 4		10
PROC 1008	Introduction to Materials Engineering	10		Credit Points	40
Business Professional Subject 3		10		Total Credit Points	440
Business Professional Subject 4		10			
	Credit Points	40			
Autumn session					
MECH 2003	Mechanics of Materials	10			
ENGR 1024	Introduction to Engineering Practice	10			
MECH 3008	Thermodynamics and Heat Transfer	10			
MECH 2001	Kinematics and Kinetics of Machines	10			
	Credit Points	40			
Year 3					
Spring session					
MECH 3004	Dynamics of Mechanical Systems	10			
MECH 3002	Advanced Mechanics of Materials	10			
Business Professional Subject 1		10			
Business Professional Subject 2		10			
	Credit Points	40			
Autumn session					
CIVL 2003	Fluid Mechanics	10			
ENGR 2035	Modern Digital Design and Development	10			
Business Major Subject 1		10			
Business Major Subject 2		10			
	Credit Points	40			
Year 4					
Spring session					
MECH 3007	Thermal and Fluid Engineering	10			
MECH 3006	Mechatronic Design	10			
Business Major Subject 3		10			
Business Major Subject 4		10			
	Credit Points	40			
Autumn session					
PROC 2003	Materials Selection and Design	10			

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/>)