

CIVIL ENGINEERING, TESTAMUR MAJOR (T131)

Western Sydney University Major Code: T131

Previous Code: MT3051.1

Available to students in other Western Sydney University programs?

No

Civil engineering covers the fields of structural design, geotechnical engineering and water engineering, together with infrastructure design and environmental engineering. Graduates may pursue career paths in the fields of design, construction and management of engineering structures and be associated with private industry, government departments, or in city, municipal or shire councils. These career paths may include engineering projects related to residential and commercial buildings, highways and airports, water supply and sewerage schemes, etc. All students complete a mandatory industrial placement.

Location

Campus	Mode	Advice	Credit Points
Parramatta Campus - Victoria Road	Internal	Program Advice (edbe@westernsydney.edu.au)	10
Parramatta City Campus-Macquarie Street	Internal	Program Advice (edbe@westernsydney.edu.au)	10
Penrith Campus	Internal	Program Advice (edbe@westernsydney.edu.au)	10
Sydney City Campus*	Internal	Peter Lendrum (https://directory.westernsydney.edu.au/search/email/p.lendrum@city.westernsydney.edu.au) Students may transfer to 3740 Bachelor of Engineering (Honours) or 3691 Bachelor of Engineering Science at the end of Year 2 of study.	10

* Curriculum delivered through an agreement with another party

Major Sequence Current

This major sequence applies to students who commenced in 2024 or later. If you commenced prior to 2024 please refer to the Sequence 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)

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.

**** Electives** must be Level 2 or higher

Start year intake

Course	Title	Credit Points
Year 1		
Autumn session		
MATH 1034	Mathematics for Engineers 1 (Advanced)	10
ENGR 1047	Advanced Engineering Physics 1	10
ELEC 1006	Engineering Computing	10
ENGR 1024	Introduction to Engineering Practice	10
Credit Points		40
Spring session		
MATH 1035	Mathematics for Engineers 2 (Advanced)	10
ENGR 1018	Fundamentals of Mechanics	10
ELEC 1003	Electrical Fundamentals	10
ENGR 2023	Advanced Engineering Physics 2	10
Credit Points		40
Year 2		
Autumn session		
CIVL 1001	Surveying for Engineers	10
MECH 2003	Mechanics of Materials	10
CIVL 2003	Fluid Mechanics	10
CIVL 2012	Soil Mechanics	10
Credit Points		40
Spring session		
CIVL 2007	Introduction to Structural Engineering	10
CIVL 2002	Environmental Engineering	10
CIVL 3011	Hydraulics	10
PROC 1008	Introduction to Materials Engineering	10
Students may transfer to 3740 Bachelor of Engineering (Honours) or 3691 Bachelor of Engineering Science at the end of Year 2 of study.		
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		
CIVL 3014	Structural Analysis	10
CIVL 4017	Surface Water Hydrology	10
CIVL 3002	Concrete Structures (UG)	10
Select one elective** or Minor subject		10
Credit Points		40
Spring session		
CIVL 3012	Steel Structures	10
CIVL 3007	Engineering Geomechanics	10
ENGR 3020	Numerical Methods in Engineering	10
ENGR 2016	Pavement Materials and Design	10
Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
Credit Points		40
Year 4		
Autumn session		
ENGR 4043	Advanced Engineering Thesis 1: Preliminary Investigations	20
Select one elective** or Minor subject		10

Select one elective** or Minor subject	10	Year 3
Credit Points	40	
Spring session		
ENGR 4035 Smart and Liveable Cities	10	CIVL 3012 Steel Structures 10
ENGR 4044 Advanced Engineering Thesis 2: Detailed Investigations	20	ENGR 3020 Numerical Methods in Engineering 10
Select one elective** or Minor subject	10	CIVL 3011 Hydraulics 10
		ENGR 2016 Pavement Materials and Design 10
Credit Points	40	Credit Points
Total Credit Points	320	
Subject	Title	Credit Points
Optional Electives		
BLDG 4006 Modern Construction Enterprises	10	ENGR 3017 Industrial Experience (Engineering) 0
BLDG 4007 Modern Construction Projects	10	
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.		
ENGR 3022 Special Technical Project	10	
Mid-year intake		
Course	Title	Credit Points
Year 1		
Spring session		
MATH 1034 Mathematics for Engineers 1 (Advanced)	10	ENGR 4043 Advanced Engineering Thesis 1: Preliminary Investigations 20
ENGR 1018 Fundamentals of Mechanics	10	CIVL 3007 Engineering Geomechanics 10
ELEC 1003 Electrical Fundamentals	10	ENGR 4035 Smart and Liveable Cities 10
ENGR 2023 Advanced Engineering Physics 2	10	
Credit Points	40	Credit Points
Autumn session		
MATH 1035 Mathematics for Engineers 2 (Advanced)	10	ENGR 4044 Advanced Engineering Thesis 2: Detailed Investigations 20
MECH 2003 Mechanics of Materials	10	Select one elective** or Minor subject 10
ENGR 1047 Advanced Engineering Physics 1	10	Select one elective** or Minor subject 10
ELEC 1006 Engineering Computing	10	
Credit Points	40	Credit Points
Year 2		
Spring session		
CIVL 2007 Introduction to Structural Engineering	10	ENGR 3022 Special Technical Project 10
CIVL 2002 Environmental Engineering	10	
PROC 1008 Introduction to Materials Engineering	10	
Select one elective** or Minor subject	10	
Credit Points	40	
Autumn session		
CIVL 3014 Structural Analysis	10	
CIVL 2003 Fluid Mechanics	10	
CIVL 2012 Soil Mechanics	10	
ENGR 1024 Introduction to Engineering Practice	10	
Students may transfer to 3740 Bachelor of Engineering (Honours) or 3691 Bachelor of Engineering Science at the end of Year 2 of study.		
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	
Subject	Title	Credit Points
Optional Electives		
BLDG 4006 Modern Construction Enterprises	10	
BLDG 4007 Modern Construction Projects	10	
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.		
ENGR 3022 Special Technical Project	10	
Bachelor of Engineering (Honours) (3740)		
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.		
** 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)		
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 following		10
MATH 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
	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	
	Credit Points	40
Year 2		
Autumn session		
CIVL 1001	Surveying for Engineers	10
MECH 2003	Mechanics of Materials	10
CIVL 2003	Fluid Mechanics	10
CIVL 2012	Soil Mechanics	10
	Credit Points	40
Spring session		
ENGR 2016	Pavement Materials and Design	10
CIVL 2007	Introduction to Structural Engineering	10
CIVL 2002	Environmental Engineering	10
CIVL 3011	Hydraulics	10
	Credit Points	40
Year 3		
Autumn session		
CIVL 3014	Structural Analysis	10
CIVL 4017	Surface Water Hydrology	10
CIVL 3002	Concrete Structures (UG)	10
Select one elective** or Minor subject		10
	Credit Points	40
Spring session		
CIVL 3012	Steel Structures	10
CIVL 3007	Engineering Geomechanics	10
ENGR 3020	Numerical Methods in Engineering	10
Select one elective** or Minor subject		10
	Credit Points	40
Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 4		
Autumn session		
ENGR 4041	Final Year Project 1 (UG Engineering)	20
BLDG 4008	Digital Construction	10
Select one elective** or Minor subject		10
	Credit Points	40
Spring session		
ENGR 4042	Final Year Project 2 (UG Engineering)	20
ENGR 4035	Smart and Liveable Cities	10
Select one elective** or Minor subject		10
	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 4011 Sustainability and Risk Engineering , replaced by ENGR 4035 Smart and Liveable Cities

Mid-year intake

Course	Title	Credit Points
Year 1		
Spring session		
ENGR 1018	Fundamentals of Mechanics	10
PROC 1008	Introduction to Materials Engineering	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	
	Credit Points	40
Autumn session		
MECH 2003	Mechanics of Materials	10
ENGR 1011	Engineering Physics	10
ELEC 1006	Engineering Computing	10
Select one of the following		10
MATH 1016	Mathematics for Engineers 1	
MATH 1019	Mathematics for Engineers 2	
	Credit Points	40
Year 2		
Spring session		
CIVL 2007	Introduction to Structural Engineering	10
CIVL 2002	Environmental Engineering	10
ENGR 2016	Pavement Materials and Design	10
ELEC 1003	Electrical Fundamentals	10
	Credit Points	40
Autumn session		
CIVL 3014	Structural Analysis	10
CIVL 2003	Fluid Mechanics	10
CIVL 2012	Soil Mechanics	10
CIVL 1001	Surveying for Engineers	10
	Credit Points	40
Year 3		
Spring session		
CIVL 3012	Steel Structures	10
ENGR 3020	Numerical Methods in Engineering	10
CIVL 3007	Engineering Geomechanics	10
	Credit Points	40
Autumn session		
CIVL 4017	Surface Water Hydrology	10
CIVL 3002	Concrete Structures (UG)	10
Select one elective** or Minor subject		10
	Credit Points	40
Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 4		
Autumn session		
ENGR 4041	Final Year Project 1 (UG Engineering)	20
BLDG 4008	Digital Construction	10
Select one elective** or Minor subject		10
	Credit Points	40
Spring session		
ENGR 4042	Final Year Project 2 (UG Engineering)	20
ENGR 4035	Smart and Liveable Cities	10
Select one elective** or Minor subject		10
	Credit Points	40
Total Credit Points		320

Year 4		ENGR 3030	Specialisation Workshop 2	10	
Spring session		Credit Points			
ENGR 4041	Final Year Project 1 (UG Engineering)	20			
ENGR 4035	Smart and Liveable Cities	10			
Select one elective** or Minor subject		10			
	Credit Points	40			
Autumn session					
ENGR 4042	Final Year Project 2 (UG Engineering)	20			
BLDG 4008	Digital Construction	10			
Select one elective** or Minor subject		10			
	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 4011 Sustainability and Risk Engineering, replaced by ENGR 4035 Smart and Liveable Cities

Bachelor of Engineering Science

This Major will be offered at Parramatta, 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 sequence 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 following		10		
MATH 1021	Mathematics for Engineers Preliminary			
MATH 1016	Mathematics for Engineers 1			
	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			
	Credit Points	40		
Year 2				
Autumn session				
CIVL 1001	Surveying for Engineers	10		
MECH 2003	Mechanics of Materials	10		
CIVL 2003	Fluid Mechanics	10		
ENGR 3029	Specialisation Workshop 1	10		
	Credit Points	40		
Spring session				
ENGR 2016	Pavement Materials and Design	10		
CIVL 2007	Introduction to Structural Engineering	10		
CIVL 3011	Hydraulics	10		
	Credit Points	40		
Year 3				
Autumn session				
CIVL 3014	Structural Analysis	10		
CIVL 3002	Concrete Structures (UG)	10		
ENGR 3013	Engineering Science Project 1	10		
CIVL 2012	Soil Mechanics	10		
	Credit Points	40		
Spring session				
CIVL 3012	Steel Structures	10		
ENGR 3014	Engineering Science Project 2	10		
Select two electives (Level 2 or higher)		20		
*Elective must be Level 2 or higher (an exception applies for students completing Mathematics for Engineers Preliminary subject)				
Industrial Experience				
ENGR 2033	Industrial Experience (Engineering Technologist)	0		
	Credit Points	40		
	Total Credit Points	240		
Subject				
Title				
Credit Points				
Optional Elective				
The following subject is an optional elective unit 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.				
ENGR 3022	Special Technical Project	10		
Mid-year intake				
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 following		10		
MATH 1021	Mathematics for Engineers Preliminary			
MATH 1016	Mathematics for Engineers 1			
	Credit Points	40		
Autumn session				
MECH 2003	Mechanics of Materials	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			
	Credit Points	40		
Year 2				
Spring session				
CIVL 2007	Introduction to Structural Engineering	10		
ENGR 2016	Pavement Materials and Design	10		
ENGR 3029	Specialisation Workshop 1	10		
	Credit Points	40		
Year 3				
Spring session				
CIVL 3014	Structural Analysis	10		
CIVL 3002	Concrete Structures (UG)	10		
ENGR 3013	Engineering Science Project 1	10		
CIVL 2012	Soil Mechanics	10		
	Credit Points	40		
Spring session				
CIVL 3012	Steel Structures	10		
ENGR 3014	Engineering Science Project 2	10		
Select one elective		10		

*Elective subjects must be level 2 or higher (an exception applies for students completing Mathematics for Engineers Preliminary subject)

Credit Points		40
Autumn session		
CIVL 3014	Structural Analysis	10
ELEC 1006	Engineering Computing	10
CIVL 2003	Fluid Mechanics	10
ENGR 3030	Specialisation Workshop 2	10
Credit Points		40
Year 3		
Spring session		
CIVL 3012	Steel Structures	10
CIVL 3011	Hydraulics	10
ENGR 3013	Engineering Science Project 1	10
Select one elective		10
*Elective subjects must be level 2 or higher		
Credit Points		40
Autumn session		
CIVL 1001	Surveying for Engineers	10
CIVL 2012	Soil Mechanics	10
CIVL 3002	Concrete Structures (UG)	10
ENGR 3014	Engineering Science Project 2	10
Industrial Experience		
ENGR 2033	Industrial Experience (Engineering Technologist)	0
Credit Points		40
Total Credit Points		240

Subject	Title	Credit Points
Optional Elective		
The following subject is an optional elective unit 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.		
ENGR 3022	Special Technical Project	10

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
Year 1		
Autumn session		
MATH 1016	Mathematics for Engineers 1	10
ENGR 1011	Engineering Physics	10
ENGR 1024	Introduction to Engineering Practice	10
Business Core Subject 1		10
Credit Points		40
Spring session		
MATH 1019	Mathematics for Engineers 2	10
PROC 1008	Introduction to Materials Engineering	10

Business Core Subject 2	10
Business Core Subject 3	10

Credit Points	40
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Year 2	
Autumn session	
ELEC 1006	Engineering Computing
Business Core Subject 4	10
Business Professional Subject 1	10
Business Professional Subject 2	10

Credit Points	40
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Spring session	
ELEC 1003	Electrical Fundamentals
ENGR 1018	Fundamentals of Mechanics
Business Major Subject 1	10
Business Major Subject 2	10

Credit Points	40
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Year 3	
Autumn session	
CIVL 1001	Surveying for Engineers
MECH 2003	Mechanics of Materials
CIVL 2003	Fluid Mechanics
CIVL 2012	Soil Mechanics

Credit Points	40
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Spring session	
ENGR 2016	Pavement Materials and Design
CIVL 2007	Introduction to Structural Engineering
CIVL 2002	Environmental Engineering
CIVL 3011	Hydraulics

Credit Points	40
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Year 4	
Autumn session	
CIVL 3014	Structural Analysis
CIVL 3002	Concrete Structures (UG)
CIVL 4017	Surface Water Hydrology
Business Major Subject 3	10

Credit Points	40
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Spring session	
CIVL 3012	Steel Structures
CIVL 3007	Engineering Geomechanics
ENGR 3020	Numerical Methods in Engineering
Business Major Subject 4	10

Credit Points	40
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Industrial Experience	
ENGR 3017	Industrial Experience (Engineering)
Credit Points	
ENGR 3017	0

Credit Points	40
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Year 5	
Autumn session	
ENGR 4041	Final Year Project 1 (UG Engineering)
BLDG 4008	Digital Construction
Business Major Subject 5	10

Credit Points	40
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Spring session	
ENGR 4042	Final Year Project 2 (UG Engineering)
ENGR 4035	Smart and Liveable Cities
Business Major Subject 6	10

Credit Points	40
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Year 6		Business Major Subject 3				
Autumn session		Credit Points				
Business Major Subject 7	10	ELEC 1006	Engineering Computing			
Business Major Subject 8	10	CIVL 1001	Surveying for Engineers			
Business Professional Subject 3	10	Business Professional Subject 2	10			
Business Professional Subject 4	10	Business Major Subject 4	10			
Credit Points	40	Industrial Experience				
Total Credit Points	440	ENGR 3017	Industrial Experience (Engineering)			
Mid-year intake		Credit Points				
Course	Title	Credit Points	Year 5			
Year 1		Spring session				
Spring session		ENGR 4041	Final Year Project 1 (UG Engineering)			
MATH 1016	Mathematics for Engineers 1	10	ENGR 4035	Smart and Liveable Cities		
ENGR 1024	Introduction to Engineering Practice	10	Business Major Subject 5	10		
PROC 1008	Introduction to Materials Engineering	10	Credit Points	40		
Business Core Subject 1		10	Autumn session			
Credit Points	40	ENGR 4042	Final Year Project 2 (UG Engineering)			
Autumn session		BLDG 4008	Digital Construction			
MATH 1019	Mathematics for Engineers 2	10	Business Major Subject 6	10		
ENGR 1011	Engineering Physics	10	Credit Points	40		
Business Core Subject 2		10	Year 6			
Business Core Subject 3		10	Spring session			
Credit Points	40	Business Professional Subject 3	10			
Year 2		Business Professional Subject 4	10			
Spring session		Business Major Subject 7	10			
ELEC 1003	Electrical Fundamentals	10	Business Major Subject 8	10		
ENGR 1018	Fundamentals of Mechanics	10	Credit Points	40		
Business Core Subject 4		10	Total Credit Points	440		
Business Major Subject 1		10	Major Sequence 2022-2023			
Credit Points	40	If you commenced in 2024 or later please refer to the Structure 2024 tab for details.				
Autumn session		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.				
MECH 2003	Mechanics of Materials	10	Please follow the recommended sequence for your course as noted below.			
CIVL 2003	Fluid Mechanics	10	Select the link for your program below to see details of the major			
Business Professional Subject 1		10	Bachelor of Engineering Advanced (Honours)			
Business Major Subject 2		10	This Major will be offered at Engineering Innovation Hub – Hassall St, Parramatta City Campus.			
Credit Points	40	Qualification for this award requires the successful completion of 320 credit points, which include the subjects listed in the recommended sequence below.				
Year 3		Start-year intake				
Spring session		Course	Title	Credit Points		
ENGR 2016	Pavement Materials and Design	10	Year 1			
CIVL 2007	Introduction to Structural Engineering	10	Autumn session			
CIVL 2002	Environmental Engineering	10	MATH 1034	Mathematics for Engineers 1 (Advanced)	10	
CIVL 3011	Hydraulics	10	ENGR 1047	Advanced Engineering Physics 1	10	
Credit Points	40					
Autumn session						
CIVL 3014	Structural Analysis	10				
CIVL 3002	Concrete Structures (UG)	10				
CIVL 4017	Surface Water Hydrology	10				
CIVL 2012	Soil Mechanics	10				
Credit Points	40					
Year 4						
Spring session						
CIVL 3012	Steel Structures	10				
CIVL 3007	Engineering Geomechanics	10				
ENGR 3020	Numerical Methods in Engineering	10				

ELEC 1006	Engineering Computing	10	ENGR 4036	Advanced Engineering Thesis 2: Detailed Investigations	10
ENGR 1024	Introduction to Engineering Practice	10			
	Credit Points	40	One Alternate subject		10
Spring session			Select one elective		10
MATH 1035	Mathematics for Engineers 2 (Advanced)	10		• Elective subjects must be Level 2 or higher	
ENGR 1018	Fundamentals of Mechanics	10			
PROC 1008	Introduction to Materials Engineering	10			
Select one elective		10			
• Elective must be Level 1 or higher					
	Credit Points	40			
Year 2					
Autumn session					
CIVL 1001	Surveying for Engineers	10	ENGR 3001	Advanced Engineering Topic 1	10
MECH 2003	Mechanics of Materials	10	ENGR 4001	Advanced Engineering Topic 2	10
CIVL 2003	Fluid Mechanics	10	CIVL 4001	Applied Mechanics	10
CIVL 2012	Soil Mechanics	10	CIVL 3022	Bridge Embankment Design	10
	Credit Points	40	CIVL 3021	Bridge Engineering Design	10
Spring session			CIVL 4002	Composite Structures	10
ENGR 2016	Pavement Materials and Design	10	CIVL 3010	Highway Infrastructure	10
CIVL 2007	Introduction to Structural Engineering	10	CIVL 3018	Hydrogeology	10
CIVL 2002	Environmental Engineering	10	CIVL 4008	Pile Foundations	10
CIVL 3011	Hydraulics	10	EART 3005	Statistical Hydrology	10
Students may transfer to 3740 Bachelor of Engineering (Honours) or 3691 Bachelor of Engineering Science at the end of Year 2 of study.			CIVL 4021	Sustainable Waste Engineering	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.			CIVL 4009	Timber Structures (UG)	10
	Credit Points	40	CIVL 4012	Water Resource Engineering	10
Year 3			CIVL 2018	Water Supply Systems Design	10
Autumn session					
CIVL 3014	Structural Analysis	10			
CIVL 4017	Surface Water Hydrology	10			
CIVL 3002	Concrete Structures (UG)	10			
One Alternate subject		10			
	Credit Points	40			
Spring session					
CIVL 3012	Steel Structures	10			
CIVL 3007	Engineering Geomechanics	10			
ENGR 3020	Numerical Methods in Engineering	10			
One Alternate subject		10			
Industrial Experience					
ENGR 3017	Industrial Experience (Engineering)	0			
	Credit Points	40			
Year 4					
Autumn session					
ENGR 4037	Advanced Engineering Thesis 1: Preliminary Investigations	10			
One Alternate Subject		10			
Select two electives		20			
• Elective subjects must be Level 2 or higher					
	Credit Points	40			
Spring session					
ENGR 4035	Smart and Liveable Cities	10			

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 2023 or earlier.

CIVL 3020 Sustainable Waste Engineering, replaced by CIVL 4021 Sustainable Waste Engineering

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
PROC 1008	Introduction to Materials Engineering	10
ENGR 1024	Introduction to Engineering Practice	10
Credit Points		40
Autumn session		
MATH 1035	Mathematics for Engineers 2 (Advanced)	10
MECH 2003	Mechanics of Materials	10
ENGR 1047	Advanced Engineering Physics 1	10
ELEC 1006	Engineering Computing	10
Credit Points		40

Year 2		
Spring session		
CIVL 2007	Introduction to Structural Engineering	10
CIVL 2002	Environmental Engineering	10
ENGR 2016	Pavement Materials and Design	10
Select one elective		10
• Elective unit must be Level 2 or higher		
Credit Points		40

Autumn session		
CIVL 3014	Structural Analysis	10
CIVL 2003	Fluid Mechanics	10
CIVL 2012	Soil Mechanics	10
select one elective (level 2 or higher)		10
Students may transfer to 3740 Bachelor of Engineering (Honours) or 3691 Bachelor of Engineering Science at the end of Year 2 of study.		
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		
Spring session		
CIVL 3012	Steel Structures	10
ENGR 3020	Numerical Methods in Engineering	10
CIVL 3011	Hydraulics	10
One Alternate subject		10
Credit Points		40

Autumn session

CIVL 1001	Surveying for Engineers	10
CIVL 4017	Surface Water Hydrology	10
CIVL 3002	Concrete Structures (UG)	10
One Alternate subject		10
Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
Credit Points		40

Year 4

Spring session		
ENGR 4037	Advanced Engineering Thesis 1: Preliminary Investigations	10
ENGR 4035	Smart and Liveable Cities	10
CIVL 3007	Engineering Geomechanics	10
One Alternate subject		10
Credit Points		40
Autumn session		
ENGR 4036	Advanced Engineering Thesis 2: Detailed Investigations	10
One Alternate subject		10
Select two electives		20
• Elective unit must be Level 2 or higher		
Credit Points		40
Total Credit Points		320

Alternate Subjects

Subject	Title	Credit Points
ENGR 3001	Advanced Engineering Topic 1	10
ENGR 4001	Advanced Engineering Topic 2	10
CIVL 4001	Applied Mechanics	10
CIVL 3022	Bridge Embankment Design	10
CIVL 3021	Bridge Engineering Design	10
CIVL 4002	Composite Structures	10
CIVL 3010	Highway Infrastructure	10
CIVL 3018	Hydrogeology	10
CIVL 4008	Pile Foundations	10
EART 3005	Statistical Hydrology	10
CIVL 4021	Sustainable Waste Engineering	10
CIVL 4009	Timber Structures (UG)	10
CIVL 4012	Water Resource Engineering	10
CIVL 2018	Water Supply Systems Design	10

Optional Electives

Subject	Title	Credit Points
BLDG 4006	Modern Construction Enterprises	10
BLDG 4007	Modern Construction Projects	10

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.

ENGR 3022	Special Technical Project	10
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Minors

Alternate subjects may be used to complete one of the minors listed below.

Geotechnical, Minor (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/geotechnical-minor/>)
 Structures, Minor (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/structures-minor/>)
 Water and Environment, Minor (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/water-environment-minor/>)

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

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 2023 or earlier.

CIVL 3020 Sustainable Waste Engineering, replaced by CIVL 4021 Sustainable Waste Engineering

Bachelor of Engineering Science

This Major will be offered at Parramatta, 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 sequence below.

*** All students undertaking the Bachelor of Engineering Science are required to enrol in MATH 1021 Mathematics for Engineers Preliminary and undertake a readiness test at the beginning of their study.**

The readiness test will be conducted at the beginning of the first semester of enrolment and the result will be used to 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.

Students remaining in MATH 1021 Mathematics for Engineers Preliminary will be required to complete MATH 1016 Mathematics for Engineers 1 during second semester and will be encouraged to complete MATH 1019 Mathematics for Engineers 2 during the Summer session.

Students who finish MATH 1021 Mathematics for Engineers Preliminary will then use this subject as an elective.

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 following:		
MATH 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
Credit Points		40
Spring session		
ENGR 1018	Fundamentals of Mechanics	10
PROC 1008	Introduction to Materials Engineering	10
Select one elective		10
• Elective must be Level 2 or higher		
Select one of the following:		10
MATH 1016	Mathematics for Engineers 1	
MATH 1019	Mathematics for Engineers 2	
Credit Points		40
Year 2		
Autumn session		
CIVL 1001	Surveying for Engineers	10
MECH 2003	Mechanics of Materials	10
CIVL 2003	Fluid Mechanics	10
ENGR 3029	Specialisation Workshop 1	10
Credit Points		40
Spring session		
ENGR 2016	Pavement Materials and Design	10
CIVL 2007	Introduction to Structural Engineering	10
CIVL 3011	Hydraulics	10
ENGR 3030	Specialisation Workshop 2	10
Credit Points		40
Year 3		
Autumn session		
CIVL 3014	Structural Analysis	10
CIVL 3002	Concrete Structures (UG)	10
ENGR 3013	Engineering Science Project 1	10
CIVL 2012	Soil Mechanics	10
Credit Points		40
Spring session		
CIVL 3012	Steel Structures	10
ENGR 3014	Engineering Science Project 2	10
CIVL 2002	Environmental Engineering	10
Select one elective		10
• Elective must be Level 2 or higher (an exception applies for students completing Mathematics for Engineers Preliminary subject)		
Industrial Experience		
ENGR 2033	Industrial Experience (Engineering Technologist)	0
Credit Points		40
Total Credit Points		240

Optional Elective

The following subject is an optional elective unit 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.

ENGR 3022 Special Technical Project

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
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Year 1**Spring session**

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
Credit Points	40

Autumn session

Select one of the following:	10
MATH 1019 Mathematics for Engineers 2	
MATH 1016 Mathematics for Engineers 1	
MECH 2003 Mechanics of Materials	10
ENGR 1011 Engineering Physics	10
Select one elective	10
• Elective must be Level 2 or higher	
Credit Points	40

Year 2**Spring session**

CIVL 2007 Introduction to Structural Engineering	10
CIVL 2002 Environmental Engineering	10
ENGR 2016 Pavement Materials and Design	10
ENGR 3029 Specialisation Workshop 1	10
Credit Points	40

Autumn session

CIVL 3014 Structural Analysis	10
ELEC 1006 Engineering Computing	10
CIVL 2003 Fluid Mechanics	10
ENGR 3030 Specialisation Workshop 2	10
Credit Points	40

Year 3**Spring session**

CIVL 3012 Steel Structures	10
CIVL 3011 Hydraulics	10
ENGR 3013 Engineering Science Project 1	10
Select one elective	10
*Elective subjects must be level 2 or higher (an exception applies for students completing Mathematics for Engineers Preliminary subject)	
Credit Points	40

Autumn session

CIVL 1001 Surveying for Engineers	10
CIVL 2012 Soil Mechanics	10
CIVL 3002 Concrete Structures (UG)	10
ENGR 3014 Engineering Science Project 2	10

Industrial Experience

ENGR 2033 Industrial Experience (Engineering Technologist)	0
Credit Points	40
Total Credit Points	240

Optional Elective

The following subject is an optional elective unit 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.

ENGR 3022 Special Technical Project

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)

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
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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:	10
MATH 1021 Mathematics for Engineers Preliminary	
MATH 1016 Mathematics for Engineers 1	
Credit Points	40

Spring session

Select one of the following:	10
MATH 1019 Mathematics for Engineers 2	
MATH 1016 Mathematics for Engineers 1	
ENGR 1018 Fundamentals of Mechanics	10
PROC 1008 Introduction to Materials Engineering	10
Select one elective	10
• Elective unit must be Level 1 or higher	
Credit Points	40

Year 2**Autumn session**

CIVL 1001 Surveying for Engineers	10
MECH 2003 Mechanics of Materials	10
CIVL 2003 Fluid Mechanics	10
CIVL 2012 Soil Mechanics	10

Spring session

ENGR 2016 Pavement Materials and Design	10
CIVL 2007 Introduction to Structural Engineering	10
CIVL 2002 Environmental Engineering	10
CIVL 3011 Hydraulics	10
Credit Points	40

Year 3**Autumn session**

CIVL 3014	Structural Analysis	10
CIVL 4017	Surface Water Hydrology	10
CIVL 3002	Concrete Structures (UG)	10
One Alternate subject		10

Credit Points	40
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Spring session

CIVL 3012	Steel Structures	10
CIVL 3007	Engineering Geomechanics	10
ENGR 3020	Numerical Methods in Engineering	10
One Alternate subject		10

Credit Points	40
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Industrial Experience

ENGR 3017	Industrial Experience (Engineering)	0
Credit Points	40	

Year 4**Autumn session**

ENGR 4025	Final Year Project 1 (UG Engineering)	10
One Alternate subject		10
Select two electives		20

*Elective subjects must be level 2 or higher (an exception applies for students completing Mathematics for Engineers Preliminary subject)

Credit Points	40
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Spring session

ENGR 4026	Final Year Project 2 (UG Engineering)	10
ENGR 4035	Smart and Liveable Cities	10
Major Alternate Subject		10
Select one elective		10

*Elective subjects must be level 2 or higher (an exception applies for students completing Mathematics for Engineers Preliminary subject)

Credit Points	40
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Total Credit Points	320
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Alternate Subjects

Subject	Title	Credit Points
ENGR 3001	Advanced Engineering Topic 1	10
ENGR 4001	Advanced Engineering Topic 2	10
CIVL 4001	Applied Mechanics	10
CIVL 3022	Bridge Embankment Design	10
CIVL 3021	Bridge Engineering Design	10
ENGR 4034	Climate Smart Engineering	10
CIVL 4002	Composite Structures	10
CIVL 3010	Highway Infrastructure	10
CIVL 3018	Hydrogeology	10
CIVL 4008	Pile Foundations	10
EART 3005	Statistical Hydrology	10
CIVL 4021	Sustainable Waste Engineering	10
CIVL 4009	Timber Structures (UG)	10
CIVL 4012	Water Resource Engineering	10
CIVL 2018	Water Supply Systems Design	10

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

ENGR 4011 Sustainability and Risk Engineering , replaced by ENGR 4035 Smart and Liveable Cities

Replaced Subjects

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

CIVL 3020 Sustainable Waste Engineering, replaced by CIVL 4021 Sustainable Waste Engineering

Mid-year intake

Course	Title	Credit Points
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Year 1**Spring session**

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

Credit Points	40
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Autumn session

Select one of the following: 10

MATH 1016 Mathematics for Engineers 1

MATH 1019 Mathematics for Engineers 2

MECH 2003 Mechanics of Materials 10

ENGR 1011 Engineering Physics 10

ELEC 1006 Engineering Computing 10

Credit Points	40
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Year 2**Spring session**

CIVL 2007 Introduction to Structural Engineering 10

CIVL 2002 Environmental Engineering 10

ENGR 2016 Pavement Materials and Design 10

Select one elective 10

*Elective subjects must be level 2 or higher (an exception applies for students completing Mathematics for Engineers Preliminary subject)

Credit Points	40
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Autumn session

CIVL 3014 Structural Analysis 10

CIVL 2003 Fluid Mechanics 10

CIVL 2012 Soil Mechanics 10

select one elective (level 2 or higher) 10

Credit Points	40
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Year 3**Spring session**

CIVL 3012 Steel Structures 10

ENGR 3020 Numerical Methods in Engineering 10

CIVL 3011 Hydraulics 10

One Alternate Subject 10

Credit Points	40
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Autumn session

CIVL 1001 Surveying for Engineers 10

CIVL 4017	Surface Water Hydrology	10
CIVL 3002	Concrete Structures (UG)	10
One Alternate Subject		10
Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 4		
Spring session		
ENGR 4025	Final Year Project 1 (UG Engineering)	10
CIVL 3007	Engineering Geomechanics	10
ENGR 4035	Smart and Liveable Cities	10
Alternate Subject		10
	Credit Points	40
Autumn session		
ENGR 4026	Final Year Project 2 (UG Engineering)	10
Major Alternate Subject		10
Select two electives		20
*Elective subjects must be level 2 or higher (an exception applies for students completing Mathematics for Engineers Preliminary subject)		
	Credit Points	40
	Total Credit Points	320

Alternate Subjects

Subject	Title	Credit Points
ENGR 3001	Advanced Engineering Topic 1	10
ENGR 4001	Advanced Engineering Topic 2	10
CIVL 4001	Applied Mechanics	10
CIVL 3022	Bridge Embankment Design	10
CIVL 3021	Bridge Engineering Design	10
ENGR 4034	Climate Smart Engineering	10
CIVL 4002	Composite Structures	10
CIVL 3010	Highway Infrastructure	10
CIVL 3018	Hydrogeology	10
CIVL 4008	Pile Foundations	10
EART 3005	Statistical Hydrology	10
CIVL 4021	Sustainable Waste Engineering	10
CIVL 4009	Timber Structures (UG)	10
CIVL 4012	Water Resource Engineering	10
CIVL 2018	Water Supply Systems Design	10

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

ENGR 4011 Sustainability and Risk Engineering, replaced by ENGR 4035 Smart and Liveable Cities

Replaced Subjects

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

CIVL 3020 Sustainable Waste Engineering, replaced by CIVL 4021 Sustainable Waste 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 sequences 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		
MATH 1019	Mathematics for Engineers 2	10
PROC 1008	Introduction to Materials Engineering	10
Business Core Subject 3		10
Business Core Subject 4		10
	Credit Points	40
Year 2		
Autumn session		
ELEC 1006	Engineering Computing	10
Business Professional Subject 1		10
Business Professional Subject 2		10
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	40
Year 3		
Autumn session		
CIVL 1001	Surveying for Engineers	10
MECH 2003	Mechanics of Materials	10
CIVL 2003	Fluid Mechanics	10
CIVL 2012	Soil Mechanics	10
	Credit Points	40
Spring session		
ENGR 2016	Pavement Materials and Design	10
CIVL 2007	Introduction to Structural Engineering	10
CIVL 2002	Environmental Engineering	10
CIVL 3011	Hydraulics	10
	Credit Points	40
Year 4		
Autumn session		
CIVL 3014	Structural Analysis	10
CIVL 3002	Concrete Structures (UG)	10
CIVL 4017	Surface Water Hydrology	10
Business Major Subject 4		10
	Credit Points	40

Spring session		Business Major Subject 2	10
CIVL 3012 Steel Structures		Business Major Subject 3	10
Credit Points			40
Year 3			
Spring session			
ENGR 2016	Pavement Materials and Design	10	
CIVL 2007	Introduction to Structural Engineering	10	
CIVL 2002	Environmental Engineering	10	
CIVL 3011	Hydraulics	10	
Credit Points			40
Year 5			
Autumn session			
Industrial Experience			
ENGR 3017 Industrial Experience (Engineering)	0		
Credit Points			40
Year 5			
Autumn session			
Industrial Experience			
ENGR 3017 Industrial Experience (Engineering)	0		
ENGR 4025 Final Year Project 1 (UG Engineering)	10		
Business Professional Subject 3	10		
Business Major Subject 7	10		
Business Major Subject 8	10		
Credit Points			40
Spring session			
ENGR 4026 Final Year Project 2 (UG Engineering)	10		
ENGR 4035 Smart and Liveable Cities	10		
ENGR 3020 Numerical Methods in Engineering	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			
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	
Business Core Subject 1		10	
Business Core Subject 2		10	
Credit Points			40
Autumn session			
MATH 1019	Mathematics for Engineers 2	10	
ENGR 1011	Engineering Physics	10	
Business Core Subject 3		10	
Business Core Subject 4		10	
Credit Points			40
Year 2			
Spring session			
ENGR 1018 Fundamentals of Mechanics	10		
Business Professional Subject 1	10		
Business Professional Subject 2	10		
Business Major Subject 1	10		
Credit Points			40
Autumn session			
MECH 2003 Mechanics of Materials	10		
CIVL 2003 Fluid Mechanics	10		
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			
Related Programs			
Bachelor of Engineering Advanced (Honours) (3771) (https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-engineering-advanced-honours/)			

Bachelor of Engineering Science (3691) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-engineering-science/>)