CIVIL, TESTAMUR MAJOR (T033)

Western Sydney University Major Code: T033

Previous Codes: KT3123.1, KT3154.1, KT3159.1, KT7000.1, ST3092.1

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 will work in the fields of design, construction and management of engineering structures. Projects may cover residential and commercial buildings, highways and airports, water supply and sewerage schemes, etc. You may be an engineer in private industry, government departments, or in city, municipal or shire councils.

Select the link for your program below for the locations of your major

Associate Degree in Engineering

Location

Campus	Mode	Advice
	Online	Miriam Krakovska (https://directory.westernsydney.edu.au/search/email/m.krakovska@westernsydney.edu.au)

- Bachelor of Engineering (Honours)

Location

Campus	Mode	Advice
Parramatta Campus - Victoria Road	Internal	beng@westernsydney.edu.au
Penrith Campus	Internal	beng@westernsydney.edu.au
Sydney City Campus*	Internal	Dr Ankit Agarwal (https://directory.westernsydney.edu.au/search/email/a.agarwal@city.westernsyd

* Curriculum delivered through an agreement with another party

Bachelor of Engineering Science

Campus	Mode	Advice
Parramatta Campus - Victoria Road	Internal	beng@westernsydney.edu.au
Penrith Campus	Internal	beng@westernsydney.edu.au
Sydney City Campus*	Internal	Peter Lendrum (https://directory.westernsydney.edu.au/search/email/p.lendrum@city.westernsydney.edu.au)

* Curriculum delivered through an agreement with another party

- Diploma in Aerotropolis Industry 4.0 (Mechatronics Skills)/Bachelor of Engineering Science
- Diploma in Engineering/Bachelor of Engineering Studies

Location

Campus	Mode	Advice
Parramatta Campus - Victoria Road	Internal	beng@westernsydney.edu.au
Penrith Campus	Internal	beng@westernsydney.edu.au

- Graduate Certificate in Engineering
- Graduate Diploma in Engineering (exit only)
- Master of Engineering

Location

Campus	Mode	Advice
Parramatta Campus - Victoria Road	Internal	Engineering@westernsydney.edu.
Parramatta City Campus-Macquarie Street	Internal	Engineering@westernsydney.edu.

Recommended Sequence

Select the link for your program below to see details of the major

Associate Degree in Engineering

Major Structure

This Civil testamur major applies to students who commenced in the Associate Degree in Engineering in Quarter 1, 2023 or later. If you commenced prior to 2023, please refer to the KT7000 Civil major in the legacy handbook for details.

Subject	Title	Credit Points
Select three of the following:		30
ENGR 2034	Geometric Design of Roads (WSTC AssocD)	
CIVL 2004	Fluid Mechanics (WSTC AssocD)	
CIVL 2008	Introduction to Structural Engineering (WSTC AssocD)	
MATH 1020	Mathematics for Engineers 2 (WSTC AssocD)	
MECH 2004	Mechanics of Materials (WSTC AssocD)	
ENGR 2017	Pavement Materials and Design (WSTC AssocD)	
CIVL 2013	Soil Mechanics (WSTC AssocD)	
CIVL 1003	Surveying for Engineers (WSTC AssocD)	
Please note: Offerings of alternate units are dependent on there being sufficient student enrolment numbers. If enrolments are low, the College may cancel delivery of the alternate unit.		
Total Credit Points		**30**

Bachelor of Engineering (Honours)

Major Structure

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

Full-time start-year intake

* All students undertaking the Bachelor of Engineering (Honours) 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.

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		
MATH 1019	Mathematics for Engineers 2	10
ENGR 1018	Fundamentals of Mechanics	10
PROC 1008	Introduction to Materials Engineering	10
Select one elective		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		
ENGR 2016	Pavement Materials and Design	10
CIVL 2007	Introduction to Structural Engineering	10
CIVL 2002	Environmental Engineering	10
CIVL 3011	Hydraulics	10
Students may transfer to 3691 Bachelor of Engineering Science at the end of Year 2 of study.		
	Credit Points	**40**
Year 3		
Autumn session		
CIVL 3014	Structural Analysis	10
CIVL 4017	Surface Water Hydrology	10
CIVL 3002	Concrete Structures (UG)	10
Major 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
Major Alternate Subject		10
Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	**40**
Year 4		
Autumn session		
ENGR 4025	Final Year Project 1 (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**
Spring session		
ENGR 4026	Final Year Project 2 (UG Engineering)	10
ENGR 4011	Sustainability and Risk Engineering	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**
	Total Credit Points	**320**

Alternate Subjects

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

Subject	Title	Credit Points
CIVL 4001	Applied Mechanics	10
CIVL 4002	Composite Structures	10
CIVL 3022	Bridge Embankment Design	10
CIVL 3021	Bridge Engineering Design	10
CIVL 3010	Highway Infrastructure	10
CIVL 3018	Hydrogeology	10
CIVL 4008	Pile Foundations	10
CIVL 4010	Transportation Engineering	10
CIVL 4009	Timber Structures (UG)	10
EART 3005	Statistical Hydrology	10
CIVL 4011	Waste Management	10
CIVL 4012	Water Resource Engineering	10
CIVL 2018	Water Supply Systems Design	10

Minors

Structures, Minor (https://hbook.westernsydney.edu.au/majors-minors/structures-minor/)

Geotechnical. Minor (https://hbook.westernsydney.edu.au/majors-minors/geotechnical-minor/)

Water and Environment, Minor (https://hbook.westernsydney.edu.au/majors-minors/water-environment-minor/)

Replaced Subjects

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

EART 4001 - Surface Water Hydrology (Core unit)

EART 3004 - Hydrogeology (Alternate unit)

CIVL 4014 - Water and Wastewater Treatment (Alternate unit)

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 Science

Full-time start-year intake

Course	Title	Credit Points
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
Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
	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 4017	Surface Water Hydrology	10
	Credit Points	**40**
Spring session		
CIVL 3012	Steel Structures	10
ENGR 3014	Engineering Science Project 2	10
Select two electives		20
*Elective subjects must be level 2 or higher		
	Credit Points	**40**
	Total Credit Points	**160**

Optional Elective

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 major, however, permission is required to enrol in the subject.

ENGR 3022 Special Technical Project

Replaced Subjects

The subjects listed below count towards completion of this major for students who passed these subjects in 2019 or earlier.

EART 4001 - Surface Water Hydrology

- Diploma in Aerotropolis Industry 4.0 (Mechatronics Skills)/Bachelor of Engineering Science
- Diploma in Engineering/Bachelor of Engineering Studies

Full-time start-year intake

Course	Title	Credit Points
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
Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
	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 4017	Surface Water Hydrology	10
	Credit Points	**40**
Spring session		
CIVL 3012	Steel Structures	10
ENGR 3014	Engineering Science Project 2	10
MATH 1019	Mathematics for Engineers 2	10
Select one elective		10
*Elective subjects must be level 2 or higher		
	Credit Points	**40**
	Total Credit Points	**160**

Optional Elective

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 major, however, permission is required to enrol in the subject.

ENGR 3022 Special Technical Project

Replaced Subjects

The subjects listed below count towards completion of this major for students who passed these subjects in 2019 or earlier.

EART 4001 - Surface Water Hydrology

- Graduate Certificate in Engineering
- Graduate Diploma in Engineering (exit only)
- Master of Engineering

Postgraduate Major Structure

To complete some of the components within the subjects in this major, students may be required to travel to other Western Sydney University campuses.

Civil Major Alternate Subjects

Specialist alternate subject offerings are subject to sufficient student demand and may not be offered annually.

Students enrolled in 3693 Master of Engineering choose seven major subjects from the list below

Students exiting with 3694 Graduate Diploma in Engineering (exit only) choose six major alternate subjects

Students enrolled in 3695 Graduate Certificate in Engineering choose four major alternate subjects

Subject	Title	Credit Points
CIVL 7001	Advanced Applied Mechanics	10
CIVL 7002	Advanced Composite Structures	10
CIVL 7003	Advanced Geotechnical Engineering	10
CIVL 7004	Advanced Highway Infrastructure	10
EART 7001	Advanced Hydrogeology	10
CIVL 7005	Advanced Numerical Methods in Engineering	10
EART 7002	Advanced Statistical Hydrology	10
CIVL 7006	Advanced Structural Analysis	10
CIVL 7007	Advanced Timber Structures	10
CIVL 7008	Advanced Waste Management	10
CIVL 7009	Advanced Water Engineering	10
CIVL 7013	Deep Foundations	10
ENGR 7020	Sustainability and Risk Engineering (PG)	10
CIVL 7015	Water Resources Systems Analysis	10
CIVL 7017	Wastewater Treatment and Recycling	10
CIVL 7018	Water Treatment and Distribution	10

Related Programs

Associate Degree in Engineering (7022) (https://hbook.westernsydney.edu.au/programs/associate-degree-engineering/)

Bachelor of Engineering (Honours) (3740) (https://hbook.westernsydney.edu.au/programs/bachelor-engineering-honours/)

Diploma in Aerotropolis Industry 4.0 (Mechatronics Skills)/Bachelor of Engineering Science (6046) (https://hbook.westernsydney.edu.au/programs/diploma-aerotropolis-industry-40-mechatronics-skillsbachelor-engineering-science/)

Diploma in Engineering/Bachelor of Engineering Studies (6033) (https://hbook.westernsydney.edu.au/programs/diploma-engineering-bachelor-engineering-studies/)

Graduate Certificate in Engineering (3695) (https://hbook.westernsydney.edu.au/programs/graduate-certificate-engineering/)

Graduate Diploma in Engineering (exit only) (3694) (https://hbook.westernsydney.edu.au/programs/graduate-diploma-engineering-exit-only/)

Master of Engineering (3693) (https://hbook.westernsydney.edu.au/programs/master-engineering/)