WESTERN SYDNEY
UNIVERSITY

Sydney City Campus

3691 Bachelor of Engineering Science
New Student Advising Guide
Sydney City Campus Trimester 3 2025

Table of Contents

WESTERN SYDNEY UNIVERSITY

Sydney City Campus

3691 Bachelor of Engineering Science

2025 New Student Advising Guide

This Advising Guide has been specifically created for new students enrolled in a Bachelor of Engineering Science in Trimester 3 2025 at Western Sydney University, Sydney City Campus to help them successfully plan out their subjects for 2025.

This guide provides students with details of the Subjects they will need to study to complete their Program. Each key program (Civil, Mechanical, and Electrical) is divided into 3 sections;

1. **Program structure:** subjects divided into categories (e.g. Core, Major and Elective).
2. **Subjects available:** subjects available in Trimester 3, 2025.
3. **Recommended sequence for Trimester 3, 2025.**

Study load options

Fulltime study:	Students should select 3 subjects per Trimester (International students are required to study a full-time load)
Part-time study:	Students should select 1-2 subjects per Trimester
Accelerated study:	Students should select 4 subjects per Trimester*

Subject prerequisites and assumed knowledge

Students should check the online handbook entry for more Subject information including prerequisites, subject levels and assumed knowledge.

Transfer Credit

Students who have received Transfer Credit for previous study should make sure they take into account which subjects they have been granted credit for, before selecting their subjects to study at Sydney City Campus. Students with Advanced Standing (or Transfer Credit) who have questions about which subjects to select can also contact Engineering Program Convenors, email engineering@city.westernsydney.edu.au for personalised course advice.

For more assistance you can also make an appointment at Sydney City Campus reception to meet with a Student Adviser or via their online booking system https://calendly.com/student-services-teams Alternatively, you can contact them at studentservices@city.westernsydney.edu.au

For electives, students can use the online handbook to search for other undergraduate subjects available at the Sydney City Campus for each trimester.

WESTERN SYDNEY UNIVERSITY

Sydney City Campus

Program Structure

Qualification for this award requires the successful completion of 240 credit points (a subject is 10cp) made up of the following Core, Major, Elective and Alternate subjects

Core Subjects (80 credit points)

MATH 1016	Mathematics for Engineers 1 (see note below)
ELEC 1006	Engineering Computing
ENGR 1011	Engineering Physics
ENGR 1024	Introduction to Engineering Practice
ENGR 1018	Fundamentals of Mechanics
PROC 1008	Introduction to Materials Engineering
ELEC 1003	Electrical Fundamentals
MATH 1019	Mathematics for Engineers 2

Note: 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 Trimester 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. For students that complete MATH 1021 Mathematics for Engineers Preliminary, this subject will replace an elective subject in the degree.

The following pages show the course structures for each of the Key Programs offered at Sydney City Campus.

WESTERN SYDNEY UNIVERSITY

Sydney City Campus

Civil Engineering Major

Civil Engineering Major subjects (140 credit points)

CIVL 1001 Surveying for Engineers

MECH 2003 Mechanics of Materials

CIVL 2003 Fluid Mechanics

CIVL 2007 Introduction to Structural Engineering

ENGR 2016 Pavement Materials and Design

CIVL 2012 Soil Mechanics

ENGR3029 Specialisation Workshop 1

ENGR3030 Specialisation Workshop 2

CIVL 3011 Hydraulics

CIVL 3014 Structural Analysis

CIVL 3002 Concrete Structures (UG)

CIVL 3012 Steel Structures

ENGR3013 Engineering Science Project 1

ENGR3014 Engineering Science Project 2

ENGR2033 Industrial Experience (Engineering Technologist) (zero (0) credit point Subject)*

Elective subjects (20 credit points)

Two (2) Elective Subjects (Level 2 or higher)

Note: (If MATH 1021 Mathematics for Engineers Preliminary is completed, this Subject takes the place of an elective Subject) (More information can be found on the University Handbook)

* Students are advised to enrol in Industrial Experience (ENGR2033) subject every session (from their third session onwards) until they complete the internship.

WESTERN SYDNEY
UNIVERSITY

Sydney City Campus

Civil subjects on offer in Trimester 3 in 2025

Subjects T3 2025	
MATH 1016	Mathematics for Engineers 1
MATH 1019	Mathematics for Engineers 2
MATH 1021	Mathematics for Engineers Preliminary
CIVL 1001	Surveying for Engineers
ELEC 1006	Engineering Computing
ENGR 1011	Engineering Physics
ENGR 1024	Introduction to Engineering Practice
MECH 2003	Mechanics of Materials
CIVL 2003	Fluid Mechanics
CIVL 2007	Introduction to Structural Engineering
CIVL 2012	Soil Mechanics
CIVL 3002	Concrete Structures (UG)
CIVL 3014	Structural Analysis
CIVL 3018	Hydrogeology
ENGR 3014	Engineering Science Project 2
CIVL 4017	Surface Water Hydrology
CIVL4011	Waste Management
ENGR 2033	Industrial Experience (Engineering Technologist)

The delivery mode is on campus face-to-face unless otherwise stated.

Note: Subjects **ENGR3029 Specialisation Workshop 1** and **ENGR3030 Specialisation Workshop 2** will be running at the main campus only during Autumn and Spring Semester. Students are advised to refer to the course handbook to determine when they can enrol and they can apply for a rule wavier via student forms online (eforms) to apply to enrol. If students have any other questions about the enrolment of these subjects, they are advised to contact their Program Convenor.

WESTERN SYDNEY
UNIVERSITY

Sydney City Campus

Recommended subjects for New Civil Engineering students in Trimester 3 in 2025

First trimester of study enrolment (in Trimester 3, 2025):

MATH 1021 OR MATH 1016	Mathematics for Engineers Preliminary OR Mathematics for Engineers 1
ENGR 1024	Introduction to Engineering Practice
ENGR 1011	Engineering Physics

If a student wants to accelerate the program, they may enrol in the 4th subject as below:

ELEC 1006	Engineering Computing

WESTERN SYDNEY UNIVERSITY

Sydney City Campus

Mechanical Engineering Major

Mechanical Engineering Major subjects (140 credit points)

MECH 2001 Kinematics and Kinetics of Machines

MECH 2003 Mechanics of Materials

CIVL 2003 Fluid Mechanics

ENGR 3029 Specialisation Workshop 1

MECH 3004 Dynamics of Mechanical Systems

ENGR 2001 Automated Manufacturing

MECH 3008 Thermodynamics and Heat Transfer

ENGR 3030 Specialisation Workshop 2

MECH 3005 Mechanical Design

MECH 3001 Advanced Dynamics

ENGR 2035 Modern Digital Design and Development

MECH 3007 Thermal and Fluid Engineering

ENGR 3013 Engineering Science Project 1

ENGR 3014 Engineering Science Project 2

ENGR 2033 Industrial Experience (Engineering Technologist)

Elective subjects (20 credit points)

Two (2) Elective Subjects (Level 2 or higher)

Note: (If MATH 1021 Mathematics for Engineers Preliminary is completed, this Subject takes the place of an elective Subject) (More information can be found on the University Handbook)

* Students are advised to enrol in Industrial Experience (ENGR2033) subject every session (from their session 3 onwards) until they complete the internship.

WESTERN SYDNEY
UNIVERSITY

Sydney City Campus

Mechanical subjects on offer in Trimester 3 in 2025

Subjects T3 2025	
MATH1016	Mathematics for Engineers 1
MATH1019	Mathematics for Engineers 2
MATH1021	Mathematics for Engineers Preliminary
ELEC1006	Engineering Computing
ENGR1011	Engineering Physics
ENGR1024	Introduction to Engineering Practice
CIVL2003	Fluid Mechanics
ENGR2024	Design Graphics: Communication for Manufacture
ENGR2025	Design Graphics: Engineering Documentation
MECH2001	Kinematics and Kinetics of Machines
MECH2003	Mechanics of Materials
MECH3001	Advanced Dynamics
MECH3005	Mechanical Design
ENGR4038	Biomedical Electronics
MECH4001	Computational Fluid Dynamics
MECH4004	Robotics
ENGR2035	Modern Digital Design and Development
PROC2003	Materials Selection and Design
ENGR3014	Engineering Science Project 2
ENGR2033	Industrial Experience (Engineering Technologist)

The delivery mode is on campus face-to-face unless otherwise stated.

Note: Subjects **ENGR3029 Specialisation Workshop 1** and **ENGR3030 Specialisation Workshop 2** will be running at the main campus only during Autumn and Spring Semester. Students are advised to refer to the course handbook to determine when they can enrol and they can apply for a rule wavier via student forms online (eforms) to apply to enrol. If students have any other questions about the enrolment of these subjects, they are advised to contact their Program Convenor.

WESTERN SYDNEY UNIVERSITY

Sydney City Campus

Recommended subjects for New Mechanical Engineering students in Trimester 3 in 2025

First trimester of study enrolment (in Trimester 3, 2025):

MATH 1021 OR MATH 1016	Mathematics for Engineers Preliminary OR Mathematics for Engineers 1
ENGR 1024	Introduction to Engineering Practice
ENGR 1011	Engineering Physics

If a student wants to accelerate the program, they may enrol in the 4th subject as below:

ELEC 1006	Engineering Computing

Electrical Engineering Major

Electrical Engineering Major subjects (140 credit points)

ELEC 2001 Circuit Theory

ELEC 2011 Signals and Systems

ELEC 1001 Digital Systems 1

ENGR 3029 Specialisation Workshop 1

ELEC 2009 Microprocessor Systems

ELEC 3011 Power and Machines

ENGR 3006 Control Systems

ENGR 3030 Specialisation Workshop 2

ELEC 3001 Communication Systems

ELEC 3006 Electrical Machines 1

ELEC 2004 Electronics

ELEC 3003 Digital Signal Processing

ENGR 3013 Engineering Science Project 1

ENGR 3014 Engineering Science Project 2

ENGR 2033 Industrial Experience (Engineering Technologist)

Elective subjects (20 credit points)

Two (2) Elective Subjects (Level 2 or higher)

Note: (If MATH 1021 Mathematics for Engineers Preliminary is completed, this Subject takes the place of an elective Subject) (More information can be found on the University Handbook)

* Students are advised to enrol in Industrial Experience (ENGR2033) subject every session (from their session 3 onwards) until they complete the internship.

WESTERN SYDNEY
UNIVERSITY

Sydney City Campus

Electrical subjects on offer in Trimester 3 in 2025

Subjects T3 2025	
MATH1016	Mathematics for Engineers 1
MATH1019	Mathematics for Engineers 2
MATH1021	Mathematics for Engineers Preliminary
ELEC1006	Engineering Computing
ENGR1011	Engineering Physics
ENGR1024	Introduction to Engineering Practice
ELEC1001	Digital Systems 1
ELEC2001	Circuit Theory
ELEC2004	Electronics
ELEC2007	Engineering Visualisation
ELEC2011	Signals and Systems
ELEC3001	Communication Systems
ELEC3006	Electrical Machines 1
ELEC4002	Power Electronics
ENGR4038	Biomedical Electronics
ENGR3014	Engineering Science Project 2
ENGR2033	Industrial Experience (Engineering Technologist)

The delivery mode is on campus face-to-face unless otherwise stated.

Note: Subjects **ENGR3029 Specialisation Workshop 1** and **ENGR3030 Specialisation Workshop 2** will be running at the main campus only during Autumn and Spring Semester. Students are advised to refer to the course handbook to determine when they can enrol and they can apply for a rule wavier via student forms online (eforms) to apply to enrol. If students have any other questions about the enrolment of these subjects, they are advised to contact their Program Convenor.

WESTERN SYDNEY
UNIVERSITY

Sydney City Campus

Recommended subjects for New Electrical Engineering students in Trimester 3 in 2025

First trimester of study enrolment (in Trimester 3, 2025):

MATH 1021 OR MATH 1016	Mathematics for Engineers Preliminary OR Mathematics for Engineers 1
ENGR 1024	Introduction to Engineering Practice
ENGR 1011	Engineering Physics

If a student wants to accelerate the program, they may enrol in the 4th subject as below:

ELEC 1006	Engineering Computing