Credit

## MATERIALS ENGINEERING, TESTAMUR MAJOR (T128)

Western Sydney University Major Code: T128

Previous Code: MT3049.1

Available to students in other Western Sydney University programs?

Νo

Since the dawning of mankind an understanding of how materials can be obtained and used has been critical to successful human endeavour. Materials engineers are concerned with the highly technological and dynamic process of understanding, developing, and applying materials (metals, polymers, ceramics, composites) to a range of engineering problems. Students will develop skills necessary to synthesise relevant information so that they can be effective decision makers in a materials context. These skills will serve them well in varied career opportunities associated with biomedical devices, nanotechnology, advanced manufacturing, opto-electronics, energy, aerospace, and sustainable construction. This major includes a mandatory 300 to 450 hour industrial placement as a completion requirement.

#### Location

Campus	Mode	Advice	Ε
Parramatta Campus - Victoria Road	Internal	Program Advice (edbe@westernsydney.e	S du
Parramatta City Campus-Macquarie Street	Internal	Program Advice (edbe@westernsydney.e	du.a
Penrith Campus	Internal	Program Advice (edbe@westernsydney.e	•

## **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 (Honours)** (3740)

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

\* 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.

\*\* 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

Course	litle	Points
Year 1		1 Onito
Autumn session		
ENGR 1011	Engineering Physics	10
ENGR 1024	Introduction to Engineering Practice	10
PROC 1006	Materials Engineering Fundamentals	10
Select one of the follo	owing:	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 follo	owing:	10
MATH 1016	Mathematics for Engineers 1	
MATH 1019	Mathematics for Engineers 2	
i.au)	Credit Points	40
Year 2		
Autumn session		
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
PROC 1006	Materials Engineering Fundamentals	10
PROC 2003	Materials Selection and Design	10
	Credit Points	40
Spring session		
ENGR 2016	Pavement Materials and Design	10
ENGR 2001	Automated Manufacturing	10
ENGR 2032	Sustainability Analysis and Design	10
Select one elective**	or minor subject	10
	Credit Points	40
Year 3		
Autumn session		
MECH 3005	Mechanical Design	10
PROC 3008	Materials Processing and Applications	10
CIVL 2003	Fluid Mechanics	10
ENGR 2035	Modern Digital Design and Development	10
	Credit Points	40
Spring session		
PROC 4001	Advanced Materials Topics	10
CIVL 4021	Sustainable Waste Engineering	10
MECH 3008	Thermodynamics and Heat Transfer	10
MECH 3002	Advanced Mechanics of Materials	10
Industrial Experience		
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40

Year 4		
Autumn session		
PROC 4002	Engineering Materials from Waste	10
ENGR 4041	Final Year Project 1 (UG Engineering)	20
Select one elective*	* or minor subject	10
	Credit Points	40
Spring session		
ENGR 4042	Final Year Project 2 (UG Engineering)	20
Select two electives	** or minor subjects	20
	Credit Points	40
	Total Credit Points	320
Mid intole		
Mid-year intake		
Course	Title	Credit Points
Vaca 1		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 fo		10
MATH 1021 MATH 1016	Mathematics for Engineers Preliminary	
MATHIUID	Mathematics for Engineers 1  Credit Points	40
Autumn session	Credit Points	40
ENGR 1011	Engineering Dhysics	10
	Engineering Physics	10
ENGR 1024 ELEC 1006	Introduction to Engineering Practice	10
Select one of the fo	Engineering Computing	10
MATH 1019	•	10
MATH 1019 MATH 1016	Mathematics for Engineers 2 Mathematics for Engineers 1	
- WATH 1010	Credit Points	40
Year 2	Credit Foliits	40
Spring session		
FNGR 2001	Automated Manufacturing	10
ENGR 2032	Sustainability Analysis and Design	10
ENGR 2016	Pavement Materials and Design	10
Select one elective*	•	10
	Credit Points	40
Autumn session	0.00.0.0	
PROC 2003	Materials Selection and Design	10
MECH 2003	Mechanics of Materials	10
MECH 2001	Kinematics and Kinetics of Machines	10
PROC 1006	Materials Engineering Fundamentals	10
	Credit Points	40
Year 3		
Spring session		
PROC 4001	Advanced Materials Topics	10
CIVL 4021	Sustainable Waste Engineering	10
MECH 3008	Thermodynamics and Heat Transfer	10
MECH 3002	Advanced Mechanics of Materials	10
	Credit Points	40
Autumn session		
MECH 3005	Mechanical Design	10
PROC 3008	Materials Processing and Applications	10
ENGR 2035	Modern Digital Design and Development	10

CIVL 2003	Fluid Mechanics	10
Industrial Experie	ence	
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 4		
Spring session		
ENGR 4041	Final Year Project 1 (UG Engineering)	20
PROC 4002	Engineering Materials from Waste	10
Select one electi	ve** or minor subject	10
	Credit Points	40
Autumn session		
ENGR 4042	Final Year Project 2 (UG Engineering)	20
Select two electi	ves** or minor subjects	20
	Credit Points	40
	Total Credit Points	320

# Bachelor of Engineering Advanced (Honours) (3771)

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
Year 1		
Autumn session		
MATH 1034	Mathematics for Engineers 1 (Advanced)	10
ENGR 1047	Advanced Engineering Physics 1	10
ENGR 1024	Introduction to Engineering Practice	10
ELEC 1006	Engineering Computing	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		
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
CIVL 2003	Fluid Mechanics	10
PROC 1006	Materials Engineering Fundamentals	10
	Credit Points	40
Spring session		
ENGR 2032	Sustainability Analysis and Design	10
ENGR 2001	Automated Manufacturing	10
PROC 1008	Introduction to Materials Engineering	10
Select one elective*	Select one elective** or Minor subject	
of completion of 160	maintain a minimum GPA of 5.0 at the end 0 Credit Points, and again at the completion will be automatically transferred to the B. rs) (3740) program.	
	Credit Points	40

<sup>\*\*</sup> Electives must be Level 2 or higher

	Total Credit Points	320
	Credit Points	40
Select two electives*	<u> </u>	20
ENGR 4044	Advanced Engineering Thesis 2: Detailed Investigations	20
Spring session		
	Credit Points	40
Select one elective**	or minor subject	10
ENGR 4043	Advanced Engineering Thesis 1: Preliminary Investigations	20
PROC 4002	Engineering Materials from Waste	10
Autumn session		
Year 4		
	Credit Points	40
ENGR 3017	Industrial Experience (Engineering)	0
Industrial Experience	2	
ENGR 2016	Pavement Materials and Design	10
MECH 3008	Thermodynamics and Heat Transfer	10
CIVL 4021	Sustainable Waste Engineering	10
PROC 4001	Advanced Materials Topics	10
Spring session	orealt rollito	-10
DOSW 2043	Credit Points	40
BUSM 2049	Creative and Innovative Thinkers	10
PROC 2003	Materials Selection and Design	10
MECH 3005	Mechanical Design	10
Autumn session PROC 3008	Materials Processing and Applications	10
Year 3		

Vear 3

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

BUSM 2047 Venture Makers Foundations, replaced by BUSM 2049 Creative and Innovative Thinkers

#### 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
ELEC 1003	Electrical Fundamentals	10
ENGR 2023	Advanced Engineering Physics 2	10
	Credit Points	40
Autumn session		
MATH 1035	Mathematics for Engineers 2 (Advanced)	10
ENGR 1047	Advanced Engineering Physics 1	10
PROC 1006	Materials Engineering Fundamentals	10
ELEC 1006	Engineering Computing	10
	Credit Points	40
Year 2		
Spring session		
ENGR 2001	Automated Manufacturing	10
ENGR 2032	Sustainability Analysis and Design	10
PROC 1008	Introduction to Materials Engineering	10

Select one elective**	or Minor subject	10
	Credit Points	40
Autumn session		
PROC 2003	Materials Selection and Design	10
MECH 2003	Mechanics of Materials	10
MECH 2001	Kinematics and Kinetics of Machines	10
PROC 3008	Materials Processing and Applications	10
of completion of 160	maintain a minimum GPA of 5.0 at the end 0 Credit Points, and again at the completion will be automatically transferred to the B. (s) (3740) program.	
	Credit Points	40
Year 3		
Spring session		
PROC 4001	Advanced Materials Topics	10
MECH 3008	Thermodynamics and Heat Transfer	10
ENGR 2016	Pavement Materials and Design	10
ENGR 1024	Introduction to Engineering Practice	10
	Credit Points	40
Autumn session		
MECH 3005	Mechanical Design	10
CIVL 2003	Fluid Mechanics	10
BUSM 2049	Creative and Innovative Thinkers	10
Select one elective**	or minor subject	10
Industrial Experience	2	
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 4		
Spring session		
ENGR 4043	Advanced Engineering Thesis 1: Preliminary Investigations	20
CIVL 4021	Sustainable Waste Engineering	10
Select one elective**	or minor subject	10
	Credit Points	40
Autumn session		
ENGR 4044	Advanced Engineering Thesis 2: Detailed Investigations	20
PROC 4002	Engineering Materials from Waste	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 2023 or earlier.

BUSM 2047 Venture Makers Foundations, replaced by BUSM 2049 Creative and Innovative Thinkers

## 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			
MATH 1016	Mathematics for Engineers 1	10	
ENGR 1011	Engineering Physics	10	
BBus Core Subject 1		10	
BBus Core Subject 2	2	10	
Spring session	Credit Points	40	
MATH 1019	Mathematics for Engineers 2	10	
ENGR 1018	Fundamentals of Mechanics	10	
ELEC 1003	Electrical Fundamentals	10	
BBus Core Subject 3		10	
BBus core oubject o	Credit Points	40	
Year 2	orealt i onits	40	
Autumn session			
ENGR 1018	Fundamentals of Mechanics	10	
BBus Professional S		10	
BBus Professional S	•	10	
BBus Core Subject 4	•	10	
	Credit Points	40	
Spring session			
ENGR 1024	Introduction to Engineering Practice	10	
ELEC 1006	Engineering Computing	10	
MECH 3008	Thermodynamics and Heat Transfer	10	
ENGR 2016	Pavement Materials and Design	10	
-	Credit Points	40	
Year 3			
Autumn session			
PROC 1006	Materials Engineering Fundamentals	10	
MECH 2001	Kinematics and Kinetics of Machines	10	
MECH 2003	Mechanics of Materials	10	
PROC 2003	Materials Selection and Design	10	
	Credit Points	40	
Spring session			
ENGR 2032	Sustainability Analysis and Design	10	
ENGR 2001	Automated Manufacturing	10	
BBus Major Subject		10	
BBus Major Subject		10	
	Credit Points	40	
Year 4			
Autumn session	Matariala Duranasiana and Auglia diagram	10	
PROC 3008	Materials Processing and Applications	10	
MECH 3005	Mechanical Design	10	
BBus Major Subject		10	
BBus Major Subject	Credit Points	10	
C	Credit Points	40	
Spring session PROC 4001	Advanced Materials Tonics	10	
CIVL 4021	Advanced Materials Topics Sustainable Waste Engineering	10 10	
	Sustainable Waste Engineering		
BBus Major Subject BBus Major Subject		10 10	
Industrial Experienc		10	
muusulai Experienc	C		

ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 5		
Autumn session		
MECH 3002	Advanced Mechanics of Materials	10
ENGR 2035	Modern Digital Design and Development	10
BBus Major Subject		10
BBus Major Subject		10
	Credit Points	40
Spring session	F: 17	
ENGR 4041	Final Year Project 1 (UG Engineering)	20
BBus Professional S	•	10
BBus Professional S	_ •	10
V6	Credit Points	40
Year 6 Autumn session		
7101011111100001011	Final Vaca Danis et 2 (UC Francis and and	20
ENGR 4042	Final Year Project 2 (UG Engineering)	20
PROC 4002	Engineering Materials from Waste Fluid Mechanics	10
CIVL 2003	Credit Points	10
-		40
	Total Credit Points	440
Mid-year intake		
Mid-year intake	Title	Credit
•		Credit Points
•		
Course		
Course Year 1		
Course Year 1 Spring session	Title	Points
Course Year 1 Spring session MATH 1016	Title  Mathematics for Engineers 1	Points
Course  Year 1  Spring session  MATH 1016  ENGR 1018	Title  Mathematics for Engineers 1  Fundamentals of Mechanics	10 10
Course  Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1	Title  Mathematics for Engineers 1  Fundamentals of Mechanics	10 10 10
Course  Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1	Title  Mathematics for Engineers 1  Fundamentals of Mechanics	10 10 10 10
Course  Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1 BBus Core Subject 2	Title  Mathematics for Engineers 1 Fundamentals of Mechanics  Credit Points  Mathematics for Engineers 2	Points  10 10 10 10 40
Course  Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1 BBus Core Subject 2  Autumn session MATH 1019 ENGR 1011	Title  Mathematics for Engineers 1 Fundamentals of Mechanics  Credit Points  Mathematics for Engineers 2 Engineering Physics	Points  10 10 10 10 40 10 10
Course  Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1 BBus Core Subject 2  Autumn session MATH 1019 ENGR 1011 ENGR 1018	Title  Mathematics for Engineers 1 Fundamentals of Mechanics  Credit Points  Mathematics for Engineers 2 Engineering Physics Fundamentals of Mechanics	Points  10 10 10 10 40 10 10
Course  Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1 BBus Core Subject 2  Autumn session MATH 1019 ENGR 1011	Title  Mathematics for Engineers 1 Fundamentals of Mechanics  Credit Points  Mathematics for Engineers 2 Engineering Physics Fundamentals of Mechanics Engineering Computing	Points  10 10 10 10 40  10 10 10 10 10 10 10
Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1 BBus Core Subject 2  Autumn session MATH 1019 ENGR 1011 ENGR 1018 ELEC 1006	Title  Mathematics for Engineers 1 Fundamentals of Mechanics  Credit Points  Mathematics for Engineers 2 Engineering Physics Fundamentals of Mechanics	Points  10 10 10 10 40  10 10 10 10 10 10 10
Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1 BBus Core Subject 2  Autumn session MATH 1019 ENGR 1011 ENGR 1018 ELEC 1006  Year 2	Title  Mathematics for Engineers 1 Fundamentals of Mechanics  Credit Points  Mathematics for Engineers 2 Engineering Physics Fundamentals of Mechanics Engineering Computing	Points  10 10 10 10 40  10 10 10 10 10 10 10
Course  Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1 BBus Core Subject 2  Autumn session MATH 1019 ENGR 1011 ENGR 1018 ELEC 1006  Year 2 Spring session	Mathematics for Engineers 1 Fundamentals of Mechanics  Credit Points  Mathematics for Engineers 2 Engineering Physics Fundamentals of Mechanics Engineering Computing Credit Points	Points  10 10 10 10 40  10 10 40 40 40
Course  Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1 BBus Core Subject 2  Autumn session MATH 1019 ENGR 1011 ENGR 1018 ELEC 1006  Year 2 Spring session PROC 1008	Mathematics for Engineers 1 Fundamentals of Mechanics  Credit Points  Mathematics for Engineers 2 Engineering Physics Fundamentals of Mechanics Engineering Computing  Credit Points  Introduction to Materials Engineering	Points  10 10 10 10 40  10 40  10 10 10 10 10 10 10 10 10 10
Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1 BBus Core Subject 2  Autumn session MATH 1019 ENGR 1011 ENGR 1018 ELEC 1006  Year 2 Spring session PROC 1008 ELEC 1003	Mathematics for Engineers 1 Fundamentals of Mechanics  Credit Points  Mathematics for Engineers 2 Engineering Physics Fundamentals of Mechanics Engineering Computing  Credit Points  Introduction to Materials Engineering Electrical Fundamentals	Points  10 10 10 10 40  10 10 40 10 10 10 10 10 10 10 10 10 10 10 10
Course  Year 1 Spring session MATH 1016 ENGR 1018 BBus Core Subject 1 BBus Core Subject 2  Autumn session MATH 1019 ENGR 1011 ENGR 1018 ELEC 1006  Year 2 Spring session PROC 1008	Mathematics for Engineers 1 Fundamentals of Mechanics  Credit Points  Mathematics for Engineers 2 Engineering Physics Fundamentals of Mechanics Engineering Computing  Credit Points  Introduction to Materials Engineering Electrical Fundamentals	Points  10 10 10 10 40  10 40  10 10 10 10 10 10 10 10 10 10

Credit Points

**Credit Points** 

Materials Engineering Fundamentals

Kinematics and Kinetics of Machines

Thermodynamics and Heat Transfer

Pavement Materials and Design

Mechanics of Materials

Materials Selection and Design

Autumn session PROC 1006

MECH 2001

MECH 2003

PROC 2003

Spring session MECH 3008

BBus Professional Subject 1

**ENGR 2016** 

Year 3

40

10

10

10

10

40

10

10

BBus Professiona	al Subject 2	10
	Credit Points	40
Autumn session		
PROC 3008	Materials Processing and Applications	10
MECH 3005	Mechanical Design	10
BBus Major Subje	ect 1	10
BBus Major Subje		10
	Credit Points	40
Year 4		
Spring session		
ENGR 2032	Sustainability Analysis and Design	10
ENGR 2001	Automated Manufacturing	10
BBus Major Subje	ect 3	10
BBus Major Subje		10
	Credit Points	40
Autumn session		
MECH 3002	Advanced Mechanics of Materials	10
ENGR 2035	Modern Digital Design and Development	10
BBus Major Subje		10
BBus Major Subje		10
Industrial Experie		10
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 5	orealt Folits	40
Spring session		
PROC 4001	Advanced Materials Topics	10
CIVL 4021	Sustainable Waste Engineering	10
BBus Major Subje		10
BBus Major Subje		10
BBus Major Subje	Credit Points	40
Autumn session	Credit Pollits	40
ENGR 4041	Final Veer Project 1 (UC Engineering)	20
	Final Year Project 1 (UG Engineering)	
PROC 4002	Engineering Materials from Waste Fluid Mechanics	10
CIVL 2003		10
	Credit Points	40
Year 6		
Spring session		
ENGR 4042	Final Year Project 2 (UG Engineering)	20
BBus Professiona	•	10
BBus Professiona	•	10
-	Credit Points	40
	Total Credit Points	440

## **Bachelor of Engineering Science (3691)**

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 foll	owing:	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 foll	owing:	10
MATH 1016	Mathematics for Engineers 1	
MATH 1019	Mathematics for Engineers 2	
	Credit Points	40
Year 2		
Autumn session		
MECH 2003	Mechanics of Materials	10
PROC 1006	Materials Engineering Fundamentals	10
PROC 2003	Materials Selection and Design	10
ENGR 3029	Specialisation Workshop 1	10
	Credit Points	40
Spring session		
ENGR 2016	Pavement Materials and Design	10
ENGR 2032	Sustainability Analysis and Design	10
MECH 3002	Advanced Mechanics of Materials	10
ENGR 3030	Specialisation Workshop 2	10
Industrial Experience		
ENGR 2033	Industrial Experience (Engineering Technologist)	0
	Credit Points	40
Year 3		
Autumn session		
ENGR 3013	Engineering Science Project 1	10
PROC 3008	Materials Processing and Applications	10
MECH 2001	Kinematics and Kinetics of Machines	10
Select one elective		10
	Credit Points	40
Spring session		
ENGR 3014	Engineering Science Project 2	10
PROC 4001	Advanced Materials Topics	10
CIVL 4021	Sustainable Waste Engineering	10
Select one elective		10

Elective must	be Level 2 or higher	
	Credit Points	40
	Total Credit Points	240
Mid-year intal	<b>Ke</b>	
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 f	following:	10
MATH 1021	Mathematics for Engineers Preliminary	
MATH 1016	Mathematics for Engineers 1	
	Credit Points	40
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 1019	Mathematics for Engineers 2	
MATH 1016	Mathematics for Engineers 1	
	Credit Points	40
Year 2		
Spring session		
ENGR 2032	Sustainability Analysis and Design	10
ENGR 2016	Pavement Materials and Design	10
ENGR 3029	Specialisation Workshop 1	10
Select one elective	e	10
Elective must	be Level 2 or higher	
	Credit Points	40
Autumn session		
PROC 2003	Materials Selection and Design	10
MECH 2003	Mechanics of Materials	10
PROC 1006	Materials Engineering Fundamentals	10
ENGR 3030	Specialisation Workshop 2	10
Industrial Experien	nce	
ENGR 2033	Industrial Experience (Engineering Technologist)	0
	Credit Points	40
Year 3		
Spring session		
ENGR 3013	Engineering Science Project 1	10
PROC 4001	Advanced Materials Topics	10
CIVL 4021	Sustainable Waste Engineering	10
MECH 3002	Advanced Mechanics of Materials	10
	Credit Points	40
Autumn session		
ENGR 3014	Engineering Science Project 2	10
PROC 3008	Materials Processing and Applications	10
MECH 2001	Kinematics and Kinetics of Machines	10

Select one elective		10
	Credit Points	40
	Total Credit Points	240

## **Major Sequence 2022-23**

If you commenced in 2024 or later please refer to the Sequence 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.

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

## **Bachelor of Engineering (Honours)**

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

\* 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.

#### Start-vear intake

MECH 2001

Start year intak	Start year intake			
Course	Title	Credit Points		
Year 1				
Autumn session				
ENGR 1011	Engineering Physics	10		
PROC 1006	Materials Engineering Fundamentals	10		
ENGR 1024	Introduction to Engineering Practice	10		
Select one of the fol	lowing:	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		
Select one elective		10		
Select one of the fol	Select one of the following:			
MATH 1016	Mathematics for Engineers 1			
MATH 1019	Mathematics for Engineers 2			
	Credit Points	40		
Year 2				
Autumn session				

Kinematics and Kinetics of Machines

ELEC 1006	Engineering Computing	10
PROC 2003	Materials Selection and Design	10
	Credit Points	40
Spring session	n	
ENGR 2016	Pavement Materials and Design	10
ENGR 2001	Automated Manufacturing	10
ENGR 2032	Sustainability Analysis and Design	10
MECH 3002	Advanced Mechanics of Materials	10
	Credit Points	40
Year 3		
Autumn session	on	
MECH 3005	Mechanical Design	10
PROC 3008	Materials Processing and Applications	10
CIVL 2003	Fluid Mechanics	10
Select one ele	ctive	10
	ust be Level 2 or higher	10
Licotive	adot be Level 2 of Higher	
	Credit Points	40
Spring session	n	
PROC 4001	Advanced Materials Topics	10
MECH 3008	Thermodynamics and Heat Transfer	10
CIVL 4021	Sustainable Waste Engineering	10
Select one Alt	ernate Subject	10
Industrial Expe	erience	
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 4		
Autumn sessi	on	
PROC 4002	Engineering Materials from Waste	10
ENGR 4025	Final Year Project 1 (UG Engineering)	10
Select one Alt	ernate Subject	10
Select one ele	ctive	10
Elective su	ubject must be Level 2 or higher	
	Credit Points	40
Spring session	n	
ENGR 4026	Final Year Project 2 (UG Engineering)	10
Two Alternate	Subjects	20
Select one ele	ctive	10
<ul> <li>Elective st</li> </ul>	ubjects must be Level 2 or higher	
	Credit Points	40
	Total Credit Points	320
		023
Alternate Sub		
Subject	Title	Credit
DIOC 1000	Inducation to University Bird	Points
BIOS 1022	Introduction to Human Biology	10

Anatomy and Physiology in Health

Biomedical Signals and Data Analysis

Renewable Energy Systems Design

Biomechanics

**Biomedical Electronics** 

**Electrical Fundamentals** 

Smart and Liveable Cities

Climate Smart Engineering

BIOS 1035 HLTH 2003

**ENGR 3003** 

ENGR 3004

**ELEC 1003** 

**ENGR 4035** 

**ENGR 4034** 

**ELEC 3010** 

Mechanics of Materials

**MECH 2003** 

CIVL 2018	Water Supply Systems Design	10
ENGR 2035	Modern Digital Design and Development	10
ENGR 3033	Digital Manufacturing and IIoT	10
ENGR 4039	Design for Advanced Manufacturing	10
HUMN 1013	Contextualising Indigenous Australia (Day Mode)	10
HUMN 1058	Indigenous Landscapes	10
HUMN 2038	Pigments of the Imagination	10
HUMN 2048	Revaluing Indigenous Economics (Day Mode)	10
PERF 2011	From Corroborees to Curtain Raisers (Day Mode)	10
VISU 2003	From Ochre to Acrylics to New Technologies	10
CEDS 3001	Bridging the Gap: Re-engaging Indigenous Learners	10
HUMN 3082	The Making of the 'Aborigines'	10
WELF 3008	Learning through Indigenous Australian Community Service (Day Mode)	10
HUMN 3070	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)	10

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

Biomedical Engineering, Minor (https://hbook.westernsydney.edu.au/majors-minors/biomedical-engineering-minor/)

Indigenous Australian Studies, Minor (https://

hbook.westernsydney.edu.au/majors-minors/indigenous-australian-studies-minor/)

Sustainability Engineering, Minor (https://

hbook.westernsydney.edu.au/majors-minors/sustainability-engineering-minor/)

Advanced Manufacturing, Minor (https://hbook.westernsydney.edu.au/majors-minors/advanced-manufacturing-minor/)

#### **Equivalent Subjects**

10

The subjects listed below count towards completion of this program for students who passed these subjects in 2020 or earlier.

BIOS 1022 Introduction to Human Biology, replaced by BIOS 1035 Anatomy and Physiology in Health

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

10

10

10

10

10

10

10

	Course	Title	Credit Points
	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 f	ollowing:	10
MATH 1019	Mathematics for Engineers 2	
MATH 1016	Mathematics for Engineers 1	
ENGR 1011	Engineering Physics	10
PROC 1006	Materials Engineering Fundamentals	10
Select one elective	2	10
Elective unit m	nust be Level 1 or higher	
	Credit Points	40
Year 2		
Spring session		
ENGR 2001	Automated Manufacturing	10
ENGR 2032	Sustainability Analysis and Design	10
ENGR 2016	Pavement Materials and Design	10
Select one elective	2	10
Elective unit m	oust be Level 2 or higher	
	Credit Points	40
Autumn session		
PROC 2003	Materials Selection and Design	10
MECH 2003	Mechanics of Materials	10
MECH 2001	Kinematics and Kinetics of Machines	10
PROC 3008	Materials Processing and Applications	10
	Credit Points	40
Year 3 Spring session		
PROC 4001	Advanced Materials Topics	10
MECH 3008	Thermodynamics and Heat Transfer	10
CIVL 4021	Sustainable Waste Engineering	10
MECH 3002	Advanced Mechanics of Materials	10
	Credit Points	40
Autumn session		
ELEC 1006	Engineering Computing	10
MECH 3005	Mechanical Design	10
CIVL 2003	Fluid Mechanics	10
One Alternate Sub	ject	10
Industrial Experien	nce	
ENGR 3017	Industrial Experience (Engineering)	(
	Credit Points	40
Year 4		
Spring session		
ENGR 4025	Final Year Project 1 (UG Engineering)	10
One Alternate subj	• • • •	10
One Alternate subj		10
Select one elective		1(
	nust be Level 2 or higher	
	Credit Points	40
Autumn session	orealt rounts	40
ENGR 4026	Final Year Project 2 (UG Engineering)	10
PROC 4002	Engineering Materials from Waste	10
Select one elective		10
One Alternate subj		10
one michiate subj		10

· Elective unit must be Level 2 or higher

**Credit Points** 

40

	Total Credit Points	320
Alternate Subje	cts	
Subject	Title	Credit Points
BIOS 1022	Introduction to Human Biology	10
BIOS 1035	Anatomy and Physiology in Health	10
HLTH 2003	Biomechanics	10
ENGR 3003	Biomedical Electronics	10
ENGR 3004	Biomedical Signals and Data Analysis	10
ELEC 1003	Electrical Fundamentals	10
ENGR 4035	Smart and Liveable Cities	10
ENGR 4034	Climate Smart Engineering	10
ELEC 3010	Renewable Energy Systems Design	10
CIVL 2018	Water Supply Systems Design	10
ENGR 2035	Modern Digital Design and Development	10
ENGR 3033	Digital Manufacturing and IIoT	10
ENGR 4039	Design for Advanced Manufacturing	10
HUMN 1013	Contextualising Indigenous Australia (Day Mode	e) 10
HUMN 1058	Indigenous Landscapes	10
HUMN 2038	Pigments of the Imagination	10
HUMN 2048	Revaluing Indigenous Economics (Day Mode)	10
PERF 2011	From Corroborees to Curtain Raisers (Day Mode	e) 10
VISU 2003	From Ochre to Acrylics to New Technologies	10
CEDS 3001	Bridging the Gap: Re-engaging Indigenous Learners	10
HUMN 3082	The Making of the 'Aborigines'	10
WELF 3008	Learning through Indigenous Australian Community Service (Day Mode)	10
HUMN 3070	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)	10

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

Biomedical Engineering, Minor (https://hbook.westernsydney.edu.au/majors-minors/biomedical-engineering-minor/)

Indigenous Australian Studies, Minor (https://

hbook.we stern sydney.edu. au/majors-minors/indigenous-australian-studies-minor/)

Sustainability Engineering, Minor (https://

hbook.we stern sydney.edu. au/majors-minors/sustain ability-engineering-minor/)

Advanced Manufacturing, Minor (https://hbook.westernsydney.edu.au/majors-minors/advanced-manufacturing-minor/)

#### **Equivalent Subjects**

The subjects listed below count towards completion of this program for students who passed these subjects in 2020 or earlier.

BIOS 1022 Introduction to Human Biology, replaced by BIOS 1035 Anatomy and Physiology in Health

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 Advanced** (Honours)

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
Year 1		1 011113
Autumn session		
MATH 1034	Mathematics for Engineers 1 (Advanced)	10
ENGR 1047	Advanced Engineering Physics 1	10
PROC 1006	Materials Engineering Fundamentals	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
PROC 1008	Introduction to Materials Engineering	10
Select one elective		10
	Credit Points	40
Year 2		
Autumn session		
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
ENGR 1045	Engineering Programming Fundamentals	10
PROC 2003	Materials Selection and Design	10
	Credit Points	40
Spring session		
MECH 2005	Mathematics for Mechanical and Mechatronic Engineers	10
ENGR 2032	Sustainability Analysis and Design	10
ENGR 2016	Pavement Materials and Design	10
ENGR 2001	Automated Manufacturing	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 3008	Materials Processing and Applications	10
MECH 3005	Mechanical Design	10
CIVL 2003	Fluid Mechanics	10
One Alternate Subje	ct	10
	Credit Points	40
Spring session		
PROC 4001	Advanced Materials Topics	10
MECH 3008	Thermodynamics and Heat Transfer	10

CIVL 4021	Sustainable Waste Engineering	10
Select one elective		10
. Flactives must	ha Laval 2 ar highar	

· Electives must be Level 2 or higher

Industrial Experien	nce	
ENGR 3017	Industrial Experience (Engineering)	0
	Credit Points	40
Year 4		
Autumn session		
PROC 4002	<b>Engineering Materials from Waste</b>	10
ENGR 4037	Advanced Engineering Thesis 1: Preliminary Investigations	10
One Alternate Subj	ject	10
Select one elective		
Elective unit m	oust be Level 2 or higher	
	Credit Points	40
Spring session		
ENGR 4036	Advanced Engineering Thesis 2: Detailed Investigations	10
Two Alternate subj	Two Alternate subjects	
Select two elective	es	20
Elective subject	cts must be Level 2 or higher	
	Credit Points	40
	Total Credit Points	320

#### **Alternate Subjects**

Subject	Title	Credit Points
BIOS 1022	Introduction to Human Biology	10
BIOS 1035	Anatomy and Physiology in Health	10
HLTH 2003	Biomechanics	10
ENGR 3003	Biomedical Electronics	10
ENGR 3004	Biomedical Signals and Data Analysis	10
ELEC 1003	Electrical Fundamentals	10
ENGR 4035	Smart and Liveable Cities	10
ENGR 4034	Climate Smart Engineering	10
ELEC 3010	Renewable Energy Systems Design	10
CIVL 2018	Water Supply Systems Design	10
ENGR 2035	Modern Digital Design and Development	10
ENGR 3033	Digital Manufacturing and IIoT	10
ENGR 4039	Design for Advanced Manufacturing	10
HUMN 1013	Contextualising Indigenous Australia (Day Mod	de) 10
HUMN 1058	Indigenous Landscapes	10
HUMN 2038	Pigments of the Imagination	10
HUMN 2048	Revaluing Indigenous Economics (Day Mode)	10
PERF 2011	From Corroborees to Curtain Raisers (Day Moo	le) 10
VISU 2003	From Ochre to Acrylics to New Technologies	10
CEDS 3001	Bridging the Gap: Re-engaging Indigenous Learners	10
HUMN 3082	The Making of the 'Aborigines'	10
WELF 3008	Learning through Indigenous Australian Community Service (Day Mode)	10
HUMN 3070	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)	10

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

Biomedical Engineering, Minor (https://hbook.westernsvdnev.edu.au/ majors-minors/biomedical-engineering-minor/)

Indigenous Australian Studies, Minor (https://

hbook.westernsydney.edu.au/majors-minors/indigenous-australianstudies-minor/)

Sustainability Engineering, Minor (https://

hbook.westernsydney.edu.au/majors-minors/sustainabilityengineering-minor/)

Advanced Manufacturing, Minor (https://hbook.westernsydney.edu.au/ majors-minors/advanced-manufacturing-minor/)

#### **Equivalent Subjects**

The subjects listed below count towards completion of this program for students who passed these subjects in 2020 or earlier.

BIOS 1022 Introduction to Human Biology, replaced by BIOS 1035 Anatomy and Physiology in Health

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

#### Mid-year intake

Course	Title	Credit Points
Year 1		
Spring session		
MATH 1034	Mathematics for Engineers 1 (Advanced)	10
ENGR 1011	Engineering Physics	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
ENGR 1047	Advanced Engineering Physics 1	10
PROC 1006	Materials Engineering Fundamentals	10
Select one elective		10
Elective unit must	st be Level 1 or higher	

Credit Points	40

#### Year 2 Spring session

Spring session		
MECH 2005	Mathematics for Mechanical and Mechatronic Engineers	10
ENGR 2001	Automated Manufacturing	10
ENGR 2032	Sustainability Analysis and Design	10
ENGR 2016	Pavement Materials and Design	10
	Credit Points	40
Autumn session		
PROC 2003	Materials Selection and Design	10
MECH 2003	Mechanics of Materials	10
MECH 2001	Kinematics and Kinetics of Machines	10
PROC 3008	Materials Processing and Applications	10
of completion of 16	o maintain a minimum GPA of 5.0 at the end 0 Credit Points, and again at the completion will be automatically transferred to the B. (3740) program.	
	Credit Points	40
Year 3		

	Credit Points	40
Year 3		
Spring session		
PROC 4001	Advanced Materials Topics	10
MECH 3008	Thermodynamics and Heat Transfer	10
CIVL 4021	Sustainable Waste Engineering	10
Select one elective		10
Elective unit must	st be Level 2 or higher	

•	Elective	unit	must	be	Level	2	or	higi	her
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	Credit Points	40
Autumn session		
ELEC 1006	Engineering Computing	10
MECH 3005	Mechanical Design	10
CIVL 2003	Fluid Mechanics	10
One Alternate subje	ect	10
Industrial Experien	ce	
ENGR 3017	Industrial Experience (Engineering)	0

LINGIT 3017	industrial Experience (Engineering)	U
	Credit Points	40
Year 4		

10

Spring session	
ENGR 4037	Advanced Engineering Thesis 1: Preliminary Investigations
One Alternate subject	t
One Alternate subject	t
Select one elective	

<ul> <li>Elective</li> </ul>	e unit must	be Level	2 or higher
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Licotive dilit	must be Level 2 of migher	
	Credit Points	40
Autumn session		
ENGR 4036	Advanced Engineering Thesis 2: Detailed Investigations	10
PROC 4002	<b>Engineering Materials from Waste</b>	10
Select one elective	ve	10
One Alternate su	bject	10
Elective unit	must be Level 2 or higher	
	Credit Points	40
	Total Credit Points	320

Credit

#### **Alternate Subjects**

Subject	Title	Credit Points
BIOS 1022	Introduction to Human Biology	10
BIOS 1035	Anatomy and Physiology in Health	10
HLTH 2003	Biomechanics	10
ENGR 3003	Biomedical Electronics	10
ENGR 3004	Biomedical Signals and Data Analysis	10
ELEC 1003	Electrical Fundamentals	10
ENGR 4035	Smart and Liveable Cities	10
ENGR 4034	Climate Smart Engineering	10
ELEC 3010	Renewable Energy Systems Design	10
CIVL 2018	Water Supply Systems Design	10
ENGR 2035	Modern Digital Design and Development	10
ENGR 3033	Digital Manufacturing and IIoT	10
ENGR 4039	Design for Advanced Manufacturing	10
HUMN 1013	Contextualising Indigenous Australia (Day Mod	de) 10
HUMN 1058	Indigenous Landscapes	10
HUMN 2038	Pigments of the Imagination	10
HUMN 2048	Revaluing Indigenous Economics (Day Mode)	10
PERF 2011	From Corroborees to Curtain Raisers (Day Mod	le) 10
VISU 2003	From Ochre to Acrylics to New Technologies	10
CEDS 3001	Bridging the Gap: Re-engaging Indigenous Learners	10
HUMN 3082	The Making of the 'Aborigines'	10
WELF 3008	Learning through Indigenous Australian Community Service (Day Mode)	10
HUMN 3070	Rethinking Research with Indigenous Australians: Independent Study Project (Day Mode)	10

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

Biomedical Engineering, Minor (https://hbook.westernsydney.edu.au/majors-minors/biomedical-engineering-minor/)

Indigenous Australian Studies, Minor (https://

hbook.westernsydney.edu.au/majors-minors/indigenous-australianstudies-minor/)

Sustainability Engineering, Minor (https://

hbook.westernsydney.edu.au/majors-minors/sustainability-engineering-minor/)

Advanced Manufacturing, Minor (https://hbook.westernsydney.edu.au/majors-minors/advanced-manufacturing-minor/)

#### **Equivalent Subjects**

The subjects listed below count towards completion of this program for students who passed these subjects in 2020 or earlier.

BIOS 1022 Introduction to Human Biology, replaced by BIOS 1035 Anatomy and Physiology in Health

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 (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

Course	ritte	Points
Year 1		
Autumn session		
MATH 1016	Mathematics for Engineers 1	10
ENGR 1011	Engineering Physics	10
BBus Core Subject		10
BBus Core Subject 2	2	10
	Credit Points	40
Spring session		
MATH 1019	Mathematics for Engineers 2	10
ENGR 1018	Fundamentals of Mechanics	10
BBus Core Subject 3	3	10
BBus Core Subject 4	1	10
	Credit Points	40
Year 2		
Autumn session		
PROC 1006	Materials Engineering Fundamentals	10
BBus Professional S	· ·	10
BBus Professional S	-	10
BBus Major Subject	1	10
	Credit Points	40
Spring session		
PROC 1008	Introduction to Materials Engineering	10
ELEC 1003	Electrical Fundamentals	10
BBus Major Subject		10
BBus Major Subject		10
	Credit Points	40
Year 3		
Autumn session		
ELEC 1006	Engineering Computing	10
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
PROC 2003	Materials Selection and Design	10
	Credit Points	40
Spring session		
ENGR 2032	Sustainability Analysis and Design	10
ENGR 2001	Automated Manufacturing	10

	Total Credit Points	400
	Credit Points	40
BBus Professiona	l Subject 4	10
ENGR 3020	Numerical Methods in Engineering	10
MECH 3008	Thermodynamics and Heat Transfer	10
ENGR 4026	Final Year Project 2 (UG Engineering)	10
Spring session		.0
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Credit Points	40
BBus Major Subje	•	10
BBus Professiona	5 5	10
PROC 4002	Engineering Materials from Waste	10
ENGR 4025	Final Year Project 1 (UG Engineering)	10
Autumn session		
Year 5	Creat Points	40
ENGR 3017	Industrial Experience (Engineering)  Credit Points	0
Industrial Experien		^
BBus Major Subje		10
BBus Major Subje		10
CIVL 4021	Sustainable Waste Engineering	10
PROC 4001	Advanced Materials Topics	10
Spring session		
	Credit Points	40
BBus Major Subje	ct 5	10
BBus Major Subje	ct 4	10
MECH 3005	Mechanical Design	10
PROC 3008	Materials Processing and Applications	10
Autumn session		
Year 4		
	Credit Points	40
ENGR 2016	Pavement Materials and Design	10
MECH 3002	Advanced Mechanics of Materials	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 1016	Mathematics for Engineers 1	10
ENGR 1018	Fundamentals of Mechanics	10
BBus Core Subject	1	10
<b>BBus Core Subject</b>	2	10
	Credit Points	40

**ENGR 4026** 

Autumn session		
MATH 1019	Mathematics for Engineers 2	10
ENGR 1011	Engineering Physics	10
BBus Core Subject 3		10
BBus Core Subject 4		10
	Credit Points	40
Year 2		
Spring session		
PROC 1008	Introduction to Materials Engineering	10
ELEC 1003	Electrical Fundamentals	10
BBus Major Subject	1	10
BBus Major Subject	2	10
	Credit Points	40
Autumn session		
PROC 1006	Materials Engineering Fundamentals	10
BBus Professional S	ubject 1	10
BBus Professional S	ubject 2	10
BBus Major Subject	3	10
	Credit Points	40
Year 3		
Spring session		
ENGR 2032	Sustainability Analysis and Design	10
ENGR 2001	Automated Manufacturing	10
PROC 2003	Materials Selection and Design	10
CIVL 4021	Sustainable Waste Engineering	10
	Credit Points	40
Autumn session		
ELEC 1006	Engineering Computing	10
MECH 2001	Kinematics and Kinetics of Machines	10
MECH 2003	Mechanics of Materials	10
PROC 2003	Materials Selection and Design	10
	Credit Points	40
Year 4		
Spring session		
PROC 4001	Advanced Materials Topics	10
MECH 3005	Mechanical Design	10
BBus Major Subject		10
BBus Major Subject		10
Industrial Experience		0
ENGR 3017	Industrial Experience (Engineering)	0
A	Credit Points	40
Autumn session	Materials Durancian and Annications	10
PROC 3008 MECH 3005	Materials Processing and Applications	10 10
	Mechanical Design	10
BBus Major Subject		10
BBus Major Subject	Credit Points	40
Year 5	Credit Points	40
Spring session		
ENGR 4025	Final Year Project 1 (UG Engineering)	10
MECH 3008	Thermodynamics and Heat Transfer	10
ENGR 3020	Numerical Methods in Engineering	10
BBus Professional S		10
	Credit Points	40
Autumn session		

Final Year Project 2 (UG Engineering)

	Total Credit Points	400
	Credit Points	40
BBus Major Subject 8		10
BBus Professional Subject 4		10
PROC 4002	<b>Engineering Materials from Waste</b>	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

### **Bachelor of Engineering Science**

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	litle	Points
Year 1		
Autumn session		
ENGR 1011	Engineering Physics	10
PROC 1006	Materials Engineering Fundamentals	10
ENGR 1024	Introduction to Engineering Practice	10
Select one of the foll	owing:	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	

	Total Credit Points	240
	Credit Points	40
Elective must be	Level 2 or higher	
Select one elective		10
CIVL 4021	Sustainable Waste Engineering	10
PROC 4001	Advanced Materials Topics	10
Spring session ENGR 3014	Engineering Science Project 2	10
Spring accoion	Credit Points	40
Elective must be	Level 2 or higher	
Select one elective		10
MECH 2001	Kinematics and Kinetics of Machines	10
PROC 3008	Materials Processing and Applications	10
ENGR 3013	Engineering Science Project 1	10
Autumn session		
Year 3		
	Credit Points	40
ENGR 2033	Industrial Experience (Engineering Technologist)	0
Industrial Experience	e	
ENGR 3030	Specialisation Workshop 2	10
MECH 3002	Advanced Mechanics of Materials	10
ENGR 2032	Sustainability Analysis and Design	10
ENGR 2016	Pavement Materials and Design	10
Spring session		
	Credit Points	40
ENGR 3029	Specialisation Workshop 1	10
PROC 2003	Materials Selection and Design	10
ELEC 1006	Engineering Computing	10
MECH 2003	Mechanics of Materials	10
Autumn session		
Year 2		
	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

#### **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

Tiela

#### Mid-year intake

	Course	litie	Points
,	Year 1		
;	Spring session		
;	Select one of the following:		10
	MATH 1021	Mathematics for Engineers Preliminary	
	MATH 1016	Mathematics for Engineers 1	

0--4:4

ELEC 1003   Electrical Fundamentals		Total Credit Points	240
ELEC 1003   Electrical Fundamentals		Credit Points	40
ELEC 1003   Electrical Fundamentals	Elective must b	e Level 2 or higher	
ELEC 1003   Electrical Fundamentals			10
ELEC 1003   Electrical Fundamentals		Kinematics and Kinetics of Machines	10
ELEC 1003   Electrical Fundamentals			10
ELEC 1003   Electrical Fundamentals			10
Credit Points	Autumn session		
Credit Points		Credit Points	40
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice  ENGR 1011 Engineering Physics  PROC 1006 Materials Engineering Fundamentals  Credit Points  40  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design  ENGR 2016 Pavement Materials and Design  ENGR 3029 Specialisation Workshop 1  Select one elective  Elective must be Level 2 or higher  Credit Points  40  Autumn session  PROC 2003 Materials Selection and Design  MECH 2003 Mechanics of Materials  ELEC 1006 Engineering Computing  ENGR 3030 Specialisation Workshop 2  Industrial Experience  ENGR 2033 Industrial Experience (Engineering Technologist)  Credit Points  40  Year 3  Spring session  ENGR 3013 Engineering Science Project 1  PROC 4001 Advanced Materials Topics	MECH 3002	Advanced Mechanics of Materials	10
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice  ENGR 1011 Engineering Physics  PROC 1006 Materials Engineering Fundamentals  Credit Points  40  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design  ENGR 2016 Pavement Materials and Design  ENGR 3029 Specialisation Workshop 1  Select one elective  Elective must be Level 2 or higher  Credit Points  40  Autumn session  PROC 2003 Materials Selection and Design  MECH 2003 Mechanics of Materials  ELEC 1006 Engineering Computing  ENGR 3030 Specialisation Workshop 2  Industrial Experience  ENGR 2033 Industrial Experience (Engineering Technologist)  Credit Points  40  Year 3  Spring session  ENGR 3013 Engineering Science Project 1  PROC 4001 Advanced Materials Topics	CIVL 4021	Sustainable Waste Engineering	10
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice  ENGR 1011 Engineering Physics  PROC 1006 Materials Engineering Fundamentals  Credit Points  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design  ENGR 2016 Pavement Materials and Design  ENGR 3029 Specialisation Workshop 1  Select one elective  Elective must be Level 2 or higher  Credit Points  40  Autumn session  PROC 2003 Materials Selection and Design  MECH 2003 Mechanics of Materials  ELEC 1006 Engineering Computing  ENGR 3030 Specialisation Workshop 2  Industrial Experience  ENGR 2033 Industrial Experience (Engineering  Technologist)  Credit Points  40  Year 3  Spring session	PROC 4001	·	10
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice  ENGR 1011 Engineering Physics  PROC 1006 Materials Engineering Fundamentals  Credit Points  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design  ENGR 2016 Pavement Materials and Design  ENGR 3029 Specialisation Workshop 1  Select one elective  Elective must be Level 2 or higher  Credit Points  Autumn session  PROC 2003 Materials Selection and Design  MECH 2003 Mechanics of Materials  ELEC 1006 Engineering Computing  ENGR 3030 Specialisation Workshop 2  Industrial Experience  ENGR 2033 Industrial Experience (Engineering Technologist)  Credit Points  40  40  40  40  40  40  40  40  40  4	ENGR 3013	Engineering Science Project 1	10
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10  ENGR 1011 Engineering Physics 10  Credit Points  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design 10  ENGR 3029 Specialisation Workshop 1 10  Select one elective  Elective must be Level 2 or higher  Credit Points  Autumn session  PROC 2003 Materials Selection and Design 10  ELEC 1006 Engineering Computing 10  ENGR 3030 Specialisation Workshop 2 10  Industrial Experience  ENGR 2033 Industrial Experience (Engineering Technologist)  Credit Points 40	Spring session		
ELEC 1003 Electrical Fundamentals Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice ENGR 1011 Engineering Physics PROC 1006 Materials Engineering Fundamentals Credit Points  Year 2  Spring session ENGR 2032 Sustainability Analysis and Design ENGR 3029 Specialisation Workshop 1  Select one elective Elective must be Level 2 or higher  Credit Points  Autumn session  PROC 2003 Materials Selection and Design  MECH 2003 Engineering Computing ENGR 3030 Specialisation Workshop 2  Industrial Experience ENGR 2033 Industrial Experience (Engineering Technologist)	Year 3	Credit Politis	40
ELEC 1003 Electrical Fundamentals Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice ENGR 1011 Engineering Physics PROC 1006 Materials Engineering Fundamentals Credit Points  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design ENGR 2016 Pavement Materials and Design ENGR 3029 Specialisation Workshop 1  Select one elective Elective must be Level 2 or higher  Credit Points  Autumn session  PROC 2003 Materials Selection and Design MECH 2003 Mechanics of Materials ELEC 1006 Engineering Computing ENGR 3030 Specialisation Workshop 2  Industrial Experience ENGR 2033 Industrial Experience (Engineering			40
ELEC 1003 Electrical Fundamentals Credit Points  Autumn session  Select one of the following: MATH 1019 Mathematics for Engineers 2 MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice ENGR 1011 Engineering Physics PROC 1006 Materials Engineering Fundamentals Credit Points  40  Vear 2  Spring session  ENGR 2032 Sustainability Analysis and Design ENGR 2016 Pavement Materials and Design ENGR 3029 Specialisation Workshop 1  Select one elective • Elective must be Level 2 or higher  Credit Points  40  Autumn session  PROC 2003 Materials Selection and Design MECH 2003 Mechanics of Materials ELEC 1006 Engineering Computing ENGR 3030 Specialisation Workshop 2  Industrial Experience	ENGR 2033		0
ELEC 1003   Electrical Fundamentals   10			
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice  ENGR 1011 Engineering Physics  PROC 1006 Materials Engineering Fundamentals  Credit Points  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design  ENGR 2016 Pavement Materials and Design  ENGR 3029 Specialisation Workshop 1  Select one elective  • Elective must be Level 2 or higher  Credit Points  Autumn session  PROC 2003 Materials Selection and Design  MECH 2003 Mechanics of Materials  100  100  100  100  100  100  100  1	ENGR 3030	Specialisation Workshop 2	10
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice  ENGR 1011 Engineering Physics  PROC 1006 Materials Engineering Fundamentals  Credit Points  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design  ENGR 2016 Pavement Materials and Design  ENGR 3029 Specialisation Workshop 1  Select one elective  • Elective must be Level 2 or higher  Credit Points  Autumn session  PROC 2003 Materials Selection and Design  MECH 2003 Mechanics of Materials  100  100  100  100  100  100  100  1			10
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice  ENGR 1011 Engineering Physics  PROC 1006 Materials Engineering Fundamentals  Credit Points  40  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design  ENGR 2016 Pavement Materials and Design  ENGR 3029 Specialisation Workshop 1  Select one elective  Elective must be Level 2 or higher  Credit Points  40  Autumn session			10
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10  ENGR 1011 Engineering Physics 10  PROC 1006 Materials Engineering Fundamentals 10  Credit Points  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design 10  ENGR 2016 Pavement Materials and Design 10  ENGR 3029 Specialisation Workshop 1 10  Select one elective  • Elective must be Level 2 or higher  Credit Points 40	PROC 2003	Materials Selection and Design	10
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice  ENGR 1011 Engineering Physics  PROC 1006 Materials Engineering Fundamentals  Credit Points  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design  ENGR 2016 Pavement Materials and Design  ENGR 3029 Specialisation Workshop 1  Select one elective  • Elective must be Level 2 or higher	Autumn session		
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice  ENGR 1011 Engineering Physics  PROC 1006 Materials Engineering Fundamentals  Credit Points  40  Vear 2  Spring session  ENGR 2032 Sustainability Analysis and Design  ENGR 2016 Pavement Materials and Design  ENGR 3029 Specialisation Workshop 1  Select one elective		Credit Points	40
ELEC 1003 Electrical Fundamentals  Credit Points  Autumn session  Select one of the following:  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice  ENGR 1011 Engineering Physics  PROC 1006 Materials Engineering Fundamentals  Credit Points  40  Vear 2  Spring session  ENGR 2032 Sustainability Analysis and Design  ENGR 2016 Pavement Materials and Design  ENGR 3029 Specialisation Workshop 1  Select one elective	Elective must b	e Level 2 or higher	
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session  Select one of the following: 10  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10  ENGR 1011 Engineering Physics 10  PROC 1006 Materials Engineering Fundamentals 10  Credit Points 40  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design 10  ENGR 2016 Pavement Materials and Design 10  ENGR 3029 Specialisation Workshop 1 10			10
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session  Select one of the following: 10  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10  ENGR 1011 Engineering Physics 10  PROC 1006 Materials Engineering Fundamentals 10  Credit Points 40  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design 10  ENGR 2016 Pavement Materials and Design 10		Specialisation Workshop 1	10
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session  Select one of the following: 10  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10  ENGR 1011 Engineering Physics 10  PROC 1006 Materials Engineering Fundamentals 10  Credit Points 40  Year 2  Spring session  ENGR 2032 Sustainability Analysis and Design 10		· ·	10
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session  Select one of the following: 10  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10  ENGR 1011 Engineering Physics 10  PROC 1006 Materials Engineering Fundamentals 10  Credit Points 40  Year 2  Spring session			10
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session  Select one of the following: 10  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10  ENGR 1011 Engineering Physics 10  PROC 1006 Materials Engineering Fundamentals 10  Credit Points 40			
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session  Select one of the following: 10  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10  ENGR 1011 Engineering Physics 10  PROC 1006 Materials Engineering Fundamentals 10  Credit Points 40			
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session  Select one of the following: 10  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10  ENGR 1011 Engineering Physics 10  PROC 1006 Materials Engineering Fundamentals 10		Credit Points	40
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session  Select one of the following: 10  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10  ENGR 1011 Engineering Physics 10	PROC 1006		10
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session  Select one of the following: 10  MATH 1019 Mathematics for Engineers 2  MATH 1016 Mathematics for Engineers 1  ENGR 1024 Introduction to Engineering Practice 10			10
ELEC 1003 Electrical Fundamentals 10 Credit Points 40 Autumn session Select one of the following: 10 MATH 1019 Mathematics for Engineers 2 MATH 1016 Mathematics for Engineers 1	ENGR 1024		10
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session  Select one of the following: 10	MATH 1016	-	
ELEC 1003 Electrical Fundamentals 10  Credit Points 40  Autumn session	MATH 1019	Mathematics for Engineers 2	
ELEC 1003 Electrical Fundamentals 10  Credit Points 40	Select one of the fo	llowing:	10
ELEC 1003 Electrical Fundamentals 10			
		Credit Points	40
PROC 1008 Introduction to Materials Engineering 10	ELEC 1003	Electrical Fundamentals	10
	PROC 1008	Introduction to Materials Engineering	10
ENGR 1018 Fundamentals of Mechanics 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

## **Related Programs**

Bachelor of Engineering (Honours)/Bachelor of Business (3728) (https://hbook.westernsydney.edu.au/programs/bachelor-engineering-honours-bachelor-business/)

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

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

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