

ENGINEERING UNIT LIST

Semester 1, 2026

Unit Code	Unit Name	Unit Rules	MTH	CHLL	BER	ODL	FLXB	FLXG	FLXK	MELC	SYDA
DATSC5001	Advanced Data Science Project	PR: ITECH5500	✓			✓				✓	
DATSC5002	Advanced Data Science Project 2	PR: ITECH5500	✓			✓				✓	
DATSC7003	Experiment Design and Visualisation	PR: ITECH7001	✓			✓					
ENGIN2102	Signals and Systems	PR: MATHS1001 & MATHS1005 CO: MATHS2016	✓	✓							
ENGIN2105	Digital Logic and Electronic Systems	PR: ENGIN1002	✓	✓							
ENGIN2201	Hydraulics and Hydrology	PR: ENGIN1002	✓	✓							
ENGIN2502	Rock Fragmentation	EX: ENMIN2040	✓			✓					
ENGIN3001	Engineering Research Methodology and Management	EX: ENCOR4010 or ENMTX4060	✓	✓							
ENGIN3002	Engineering Design Project	PR: ENGIN2002 or ENMEC2121 or ENMTX2050 EX: ENMEC2120 or ENMEC2121 or ENMEC3250 or ENMTX3800	✓	✓							
ENGIN3101	Power Electronics	PR: ENGIN1007 for undergraduate students only	✓	✓	✓						
ENGIN3102	Power System Analysis	PR: ENGIN2104 or ENGIN2404 for undergraduate students only	✓	✓	✓						
ENGIN3201	Structural Design	EX: ENGIN2203	✓	✓							
ENGIN3202	Geotechnical Engineering	PR: ENGIN2104 or ENGIN2404 for undergraduate students only	✓	✓							
ENGIN3203	Traffic and Transport	EX: ENCIV3340	✓	✓							
ENGIN3204	Engineering Surveying	EX: ENCIV2010	✓	✓		✓					
ENGIN3205	Road Engineering	PR: ENGIN3203 for undergraduate students only EX: ENCIV3350	✓	✓							
ENGIN3206	Water and Wastewater	PR: ENGIN2201	✓	✓							
ENGIN3301	Fluid Dynamics	PR: ENGIN2304 or ENCOR2100 EX: ENMEC3051	✓								
ENGIN3302	Introduction to Vibration Analysis	PR: ENGIN2302 for undergraduate students only EX: ENMEC3120	✓								
ENGIN3303	Robotics	PR: ENGIN2302 or MATHS3001 EX: ENMEC4160	✓	✓		✓					
ENGIN3401	Engineering Computer Applications and Interactive Modelling	PR: ENCOR1021 or ENGIN1006 EX: ENMTX3010 & ITECH1000	✓	✓	✓						

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ENGIN3404	Systems Dynamics and Control	PR: MATHS3001 for undergraduate students only EX: ENMEC3500 & ENMTX3040	✓	✓	✓						
ENGIN3501	Underground Production Systems	PR: ENGIN2502 for undergraduate students only EX: ENMIN3020	✓			✓					
ENGIN3502	Subsurface Environmental Engineering	PR: ENGIN2304 for undergraduate students only EX: ENMIN3050 & ENMIN5023	✓			✓					
ENGIN3503	Surface Mining Operations and Equipment	PR: ENGIN2502 for undergraduate students only EX: ENMIN3070 or ENMIN5018	✓			✓					
ENGIN4001	Engineering Project 1	EX: ENCOR4100	✓	✓		✓					
ENGIN4002	Engineering Project 2	PR: ENCOR4100 or ENGIN4001 EX: ENCOR4200	✓	✓		✓					
ENGIN4101	Electrical Power Distribution Engineering	PR: ENGIN3102	✓	✓							
ENGIN4102	Power Electronic Application to Renewable Energy Systems	PR: ENGIN3101	✓								
ENGIN4201	Management of Water Resources	PR: ENGIN3203 for undergraduate students only EX: ENGGC4203	✓	✓							
ENGIN4301	Machine Dynamics and Vibration	EX: ENMEC4060	✓								
ENGIN4402	Digital and Embedded Systems	PR: ENGIN2401 or ENMTX2010 AND ENGIN3401 or ENMTX3010 EX: ENMTX3070	✓								
ENGIN5002	Advanced Engineering Project 1	PR: ENGIN3001 EX: ENCOR70200	✓	✓		✓					
ENGIN5003	Advanced Engineering Project 2	PR: ENGIN5002 EX: ENCOR7030	✓	✓		✓					
ENGIN5101	IoT in Smart Energy Systems		✓			✓					
ENGIN5102	Micro-Grid and Energy Storage Systems	PR: ENGIN3102	✓	✓							
ENGIN5205	Engineering Project Management Theory		✓			✓					
ENGIN5206	Engineering Contracts and Procurement		✓								
ENGIN5207	Data Analytics and Decision Making		✓							✓	✓

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ENGIN5302	Modelling and Simulation	PR: ENGIN2301 for undergraduate students only EX: ENCOR4050	✓								
ENGIN5505	Mine Planning and Scheduling	EX: ENMIN4090 & ENMIN7010	✓			✓					
ENGIN5507	Ore Reserve Estimation	EX: ENMIN5017	✓			✓					
ENGIN5510	Company Economics and Finance	EX: ENMIN5150				✓					
ENGIN5512	Underground Production Systems	EX: ENMIN5130				✓					
ENGP9102	Modelling and Simulation in Engineering	EX: ENGRG9101	✓								
ENGP9104	Geotechnical Engineering 2	EX: ENGRG3102	✓	✓							
ENGP9106	Structural Engineering 2	PR: ENGP9103 EX: ENGRG3101	✓	✓							
ENGP9107	Water Resource Management	EX: ENGRG9103	✓								
ENGP9201	Power Electronics	EX: ENGRG2202	✓	✓	✓						
ENGP9202	Power System Analysis	EX: ENGRG3201	✓	✓	✓						
ENGP9203	Digital and Embedded Systems	EX: ENGRG9201	✓								
ENGP9207	Electrical Power Distribution Engineering	PR: ENGP9202 EX: ENGRG9204	✓	✓							
ENGP9208	IOT in Smart Energy Systems	PR: ENGP9202 EX: ENGRG9205	✓			✓					
ENGP9209	Microgrids and Energy Storage System	PR: ENGP9204 EX: ENGRG9206	✓	✓							
ENGP9301	Solid Mechanics	EX: ENGRG2301	✓								
ENGP9306	Advanced Machine Design	PR: ENGP9301 EX: ENGRG9303	✓	✓							
ENGP9404	Subsurface Environment and Ventilation	EX: ENGRG3402	✓			✓					
ENGP9405	Mine Planning and Scheduling	EX: ENGRG4401	✓			✓					
ENGP9408	Ore Reserve Estimation	EX: ENGRG9402	✓			✓					
ENGP9409	Mine Safety and Environmental Engineering	EX: ENGRG9403	✓			✓					
ENGRG1001	Computational Skills for Engineers	EX: ENGIN1004	✓	✓		✓			✓		
ENGRG1002	Physics for Engineers 1	EX: ENGIN1002	✓	✓		✓					

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ENGRG1003	Engineering Design 1	EX: ENGIN1005	✓	✓		✓					
ENGRG2101	Construction Engineering 1	PR: ENGRG1004 EX: ENGIN2022	✓	✓		✓					
ENGRG2102	Geotechnical Engineering 1	PR: ENGRG1002 EX: ENGIN2204	✓	✓							
ENGRG2103	Water and Wastewater System	PR: ENGRG1002 EX: ENGIN3206	✓	✓							
ENGRG2105	Road and Traffic Engineering	PR: ENGRG1002 and ENGRG1004 EX: ENGIN3205	✓	✓							
ENGRG2106	Hydrology and Hydraulics	PR: ENGRG1002 EX: ENGIN2201	✓			✓					
ENGRG2201	Digital Logic and Electronic Systems	EX: ENGIN2105	✓	✓							
ENGRG2202	Power Electronics	PR: ENGRG1004 or must be undertaking EZ9 EX: ENGIN3101	✓	✓		✓					
ENGRG2203	Communication Engineering	PR: ENGRG1004 EX: ENGIN3104	✓			✓					
ENGRG2301	Solid Mechanics	PR: ENGRG1003 or must be undertaking EZ9 EX: ENGIN2301	✓			✓					
ENGRG2302	Fluid Mechanics	PR: ENGRG1002 and ENGRG1004 EX: ENGIN3301	✓			✓					
ENGRG2303	Engineering Dynamics	PR: ENGRG1002 EX: ENGIN2302	✓			✓					
ENGRG2403	Rock Fragmentation	EX: ENGIN2502	✓			✓					
ENGRG3102	Geotechnical Engineering 2	PR: ENGRG2102 EX: ENGIN3202	✓	✓							
ENGRG3402	Subsurface Environment and Ventilation	PR: ENGRG2302	✓			✓					
ENGRG9003	Advanced Engineering Design Project	PR: At least 90 Credit Points prior to enrolment	✓			✓					
ENGRG9004	Advanced Engineering Research Project 1	PR: At least 90 Credit Points prior to enrolment EX: ENGIN5002	✓	✓		✓					
ENGRG9005	Advanced Engineering Research Project 2	PR: ENGRG9004 EX: ENGIN5003	✓	✓		✓					
MATHS1100	Applied Mathematics 1	EX: MATHS1001	✓	✓	✓	✓			✓		
MATHS2003	Profit, Loss and Gambling (Intermediate level)	PR: At least one introductory level maths unit or equivalent EX: MATHS1003 and MA553 and MA653				✓					

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MATHS3100	Applied Mathematics 3	PR: MATHS1100 EX: MATHS3001	✓	✓							
MATHS5000	Mathematics for Data Science		✓			✓					
MATHS7002	Computational methods for Data Analysis	PR: STATS5000	✓			✓				✓	
MREGC5001	Terotechnology & Life Cycle Costs	EX: ENMTX4050				✓					
MREGC5002	Maintenance Management					✓					
MREGC5008	Maintenance & Reliability Engineering Project	PR: At least 45 credit points from program GEM4 or GMR9				✓					
MREGC5101	Basic Quantitative Skills for Reliability Engineering	EX: MREGC5005				✓					
MREGC5102	Understanding Reliability					✓					
STATS1000	Statistical Methods		✓	✓	✓	✓	✓	✓	✓		
STATS2101	Statistics For Prediction	PR: MS501 or STATS1000 EX: MS602	✓			✓					
STATS5000	Statistics and Reliability		✓			✓					
STATS7101	Regression and Multivariate Data Analysis	PR: STATS5000	✓			✓					

PR - Pre-Requisite ● EX - Exclusion ● CO - Co-requisite

MTH = Mt Helen ● CHLL = Churchill ● BER = Berwick ● ODL = Online Learning ● FLXB Flexible Ballarat ● FLXG Flexible Gippsland ● FLXK Flexible Berwick ●
MELC = Melbourne ● SYDA = Sydney

**This is a live document and therefore subject to change*