4618 Bachelor of Mining Engineering (Honours) 2015

Mining Engineering

Stage One: **(48 credit points)**

- Course advice is required for enrolment in stage one – enrolment plan depends on the need for foundation units
- Level 2 electives may be undertaken following successful completion of 24 credit points. If a level 2 elective is undertaken at stage one, course advice is required to ensure that all engineering course requirements are met in later stages

Core Units (30 credit points) – all students complete:	Foundation units (0, 6 or 12 credit points)
ENG1060 Computing for engineers ENG1091 Mathematics for engineering ENG1001 Engineering design: lighter, faster, stronger ENG1002 Engineering design: cleaner, safer, smarter ENG1003 Engineering mobile apps	*Students who have not completed VCE units 3&4 of Chemistry, Physics and/or Specialist Mathematics must complete one or two units from:* ENG1070 Foundation Chemistry ENG1090 Foundation Mathematics PHS1080 Foundation physics
Elective units (6, 12 or 18 credit points)	
CHM1011 Chemistry I (Clayton) ENE1621 Environmental engineering ENG1021 Spatial communication in engineering ENG1051 Materials for energy and sustainability ENG1071 Chemistry for engineering ENG1081 Physics for engineering ESC1011 Planet earth: Our place in the universe* MNE1010 Introduction to mining**	CHE2161 Mechanics of fluids *or* MEC2404 Mechanics of fluids ECE2041 Telecommunications ECE2072 Digital systems MAE2405 Aircraft performance TRC2001 Introduction to systems engineering 6cp elective – can be taken from any faculty where prerequisites can be met

MNE1010 and ESC1011 are core units for the Bachelor of Mining Engineering. It is recommended that these two units be undertaken from the electives offered in the common first year. If these units are not undertaken in first year, they must be completed at stage 2 – course advice will be required in this case. See suggested enrolment plan below.

* If students undertake ESC1011 in stage 1 as recommended, they should replace this unit with a 6 credit point elective in stage 2

** If students undertake MNE1010 in stage 1 as recommended, they should replace this unit with a 6 credit point elective in stage 2.

Stage one **(48 credit points)**

Sem 1	Engineering stage one core unit	Engineering stage one core unit	Foundation unit or ESC1011 Planet earth: Our place in the universe	Foundation unit or MNE1010 Introduction to mining
Sem 2	Engineering stage one core unit	Engineering stage one core unit	Engineering stage one core unit	Engineering stage one elective unit

Stage two **(48 credit points)**

Sem 1	CIV2206 Mechanics of solids	CIV2263 Water systems	ENG2091 Advanced engineering mathematics A	ESC2111 The dynamic earth I: Building of continents and the environment
Sem 2	CIV2242 Geomechanics 1	MNE2010 Mine power and drainage	Engineering stage two elective – choose from elective list below	Engineering stage two elective – choose from elective list below

Stage three **(48 credit points)**

Sem 1	ENE3608 Environmental impact assessment and management systems	MNE3020 Mine systems planning	MNE3040 Surface mining systems	Engineering stage 3-4 elective – choose from elective list below
Sem 2	MNE3010 Rock mechanics	MNE3030 Mine ventilation	MNE3050 Underground mining systems	MNE3060 Drilling and blasting

Stage four **(48 credit points)**

Sem 1	MNE4010 Coal mine design	MNE4030 Mine management and economics	MNE4050 Mining research project I	Engineering stage 3-4 elective – choose from elective list below
Sem 2	MNE4020 Hard rock mine design and feasibility project	MNE4040 Mineral processing	MNE4060 Mining research project II or MNE4070 Mining research project III	Engineering stage 3-4 elective – choose from elective list below

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Mining elective units:	
Stage 2: CIV2207 Computing and water systems modelling ESC2122 The dynamic Earth II: Global processes (This unit is required as a prerequisite for students planning to enrol in the level three elective unit ESC3162) ***Stage 3-4:*** ESC3162 Ore deposit geology and global metallogeny* ESC3190 Hydrogeology and environmental geoscience ESC3201 Deformation and metamorphism of the crust**	CIV3204 Engineering investigation CIV3248 Groundwater and environmental geomechanics CIV4248 Ground hazards and environmental geotechnics MNE4110 Advanced mine ventilation MNE4120 Mining asset management and services MNE4130 Mine disaster, rescue and recovery MNE4xxx Mine health and safety *Requires ESC2111 and ESC2122 (level 2 elective) as prerequisites **Recommended elective (by School of Earth, Atmosphere and Environment, Faculty of Science

Notes:

Credit points	Unless specified, all units are worth 6 credit points **Bachelor of Mining Engineering** 32 units x 6cp = **Total of 192 credit points**
Unit requisites	All pre-requisite and co-requisite requirements must be undertaken in order to be able to enrol into a specific unit
Duration of degree	4 years full-time, 8 years part-time
Time limit	Time limit = 8 years. Students have eight years in which to complete this award from the time they commence first year. Periods of intermission are counted as part of the eight years.
Course advice	www.eng.monash.edu.au/current-students/course-advice.html
Monash University handbook	Students should follow the course structure for the year the course was commenced http://monash.edu/pubs/2015handbooks/courses/index-byfaculty-eng.html

All information correct at publication but may be subject to change – 14 January 2015

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