4643 Bachelor of Environmental Engineering (Honours) 2015

Environmental 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
- Students undertake a common first year and then specialise in Environmental engineering

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 or Physics and/or Specialist Mathematics (or equivalent) must complete one or two appropriate foundations units from:* ENG1070 Foundation chemistry ENG1090 Foundation Mathematics PHS1080 Foundation physics

Elective units (6, 12 or 18 credit points)	
CHM1011 Chemistry I (Clayton) or CHM1051 Chemistry 1 advanced (Malaysia) **ENE1621 Environmental engineering – Core unit** ENG1021 Spatial communication in engineering ENG1051 Materials for energy and sustainability ENG1071 Chemistry for engineering ENG1081 Physics for engineering 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 Free elective – can be taken from any faculty where prerequisites can be met

Stage two **(48 credit points)**

Sem 1	BIO2011 Ecology and biodiversity	CHE2164 Thermodynamics	CIV2263 Water systems	ATS2548 Environmental policy and management
Sem 2	CHE2162 Material and energy balances	CIV2282 Transport and traffic engineering	ENG2091 Advanced engineering mathematics A	ENE2503 Materials properties and recycling

Stage three **(48 credit points)**

Sem 1	CIV3248 Groundwater and environmental geoengineering	CIV3264 Urban water and wastewater systems	ENE3048 Energy and environment	ENE3608 Environmental impact assessment and management systems
Sem 2	ENE3606 The air environment	Core stream unit – choose from core stream list below	Core stream unit – choose from core stream list below	Core stream unit – choose from core stream list below

Stage four **(48 credit points)**

Sem 1	ECC2800 Prosperity, poverty and sustainability in a globalised world	Core stream unit – choose from core stream list below	Core stream unit – choose from core stream list below	Engineering elective – choose from stream elective list below
Sem 2	ENE4607 Environmental risk assessment	BTC3100 Sustainability and the law	Core stream unit – choose from core stream list below	Engineering elective – choose from stream elective list below

Environmental Engineering streams - choose one stream to complete:	
Stream core units:	***Stages 3 and 4 stream electives:***
Environmental process engineering: CHE3163 Sustainable processing I CHE4170 Design project (12 points) CHM2735 Chemistry – principles and practice	**Environmental process engineering:** ***Choose four elective units (24 credit points) from:*** CHE3161 chemistry and chemical thermodynamics CHE3162 process control CHE3164 Reaction engineering CHE3165 Separation processes CHE3166 Process design CHE3175 Sustainable process engineering case studies CHE4173 Sustainable processing 2 ENE4603 Environmental project A MTE4593 Materials and environment MTE4599 Materials for energy technologies

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Stream core units:	***Stages 3 and 4 stream electives:***
Transport and built environment: CIV3205 Project management for civil engineers ENE4212 Environmental design ENE4603 Environmental project A	**Transport and built environment*:*** ***Choose five elective units (30 credit points) from:*** CIV2206 Mechanics of solids CIV2225 Design of steel and timber structures CIV2226 Design of concrete and masonry structures CIV3221 Building structures and technology CIV3247 Geomechanics II CIV3283 Road engineering CIV4234 Advanced structural analysis CIV4235 Advanced structural design CIV4249 Foundation engineering CIV4283 transport planning CIV4284 Transport systems ENE4604 Environmental project B MTE4593 Materials and environment MTE4599 Materials for energy technologies
Stream core units:	***Stages 3 and 4 stream electives:***
Water and land management: CIV3205 Project management for civil engineers ENE4212 environmental design ENE4603 Environmental project A	***Water and land management:*** ***Choose five elective units (30 credit points) from:*** CIV2207 Computer and water systems modelling CIV3204 Engineering investigations CIV3247 Geomechanics II CIV4248 Ground hazards engineering CIV4261 Integrated urban water management CIV4268 Water resources management ENE4604 environmental project B MTE4593 Materials and environment MTE4599 Materials for energy technologies

Notes:

Credit points	Unless specified, all units are worth 6 credit points **Bachelor of Environmental 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
ENE1621	Undertaken as an elective in the common first year, however, must be undertaken as a core unit in the Bachelor of Environmental Engineering
Duration of degree	4 years full-time, 8 years part-time
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
Faculty of Engineering, Monash University
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