4646 Bachelor of Environmental Engineering (Honours) and Bachelor of Science 2015

Environmental Engineering

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

Sem 1	ENE1621 Environmental engineering	ENG1002 Engineering design: cleaner, safer, smarter **or** MTH1020 (for students without VCE Specialist Maths)	Science unit from level one list below	Science unit from level one list below
Sem 2	ENG1060 Engineering computing	MTH1030 Techniques for modelling	Science unit from level one list below	Science unit from level one list below

Stage two **(48 credit points)**

Sem 1	BIO2011 Ecology and biodiversity	ENG1001 Engineering design: lighter, faster, stronger	ENG2091 Advanced engineering mathematics A	Science unit
Sem 2	BIO2040 Conservation biology	ENV2022 Environmental analysis I: Sampling and monitoring	Science unit **or** ENG1002 (if not taken at stage one)	Science unit

Stage three **(48 credit points)**

Sem 1	ATS2548 Environmental policy and management	CIV2263 Water systems	CHE2164 Thermodynamics I	Science unit
Sem 2	ENV3022 Environmental technology	CIV2282 transport and traffic engineering	CHE2162 Material and energy balances	Science unit

Stage four **(48 credit points)**

Sem 1	CHE3163 Sustainable processing I* **or** CIV3205 Project management for civil engineers**	CIV3248 Groundwater and environmental geomechanics	ECC2800 Prosperity, poverty and sustainability in a globalised world	ENE3048 Energy and the environment
Sem 2	ENE2503 Materials properties and recycling	ENE3606 The air environment	Science unit	Science unit

Stage five **(48 credit points)**

Sem 1	CIV3264 Urban water and wastewater systems	ENE3608 Environmental impact assessment and management	Environmental Eng stream elective	Environmental Eng stream elective
Sem 2	CHE4170 Design project (12cp)* **or** ENE4603 Environmental project A and ENE4212 Environmental design**		BTC3100 Sustainability and the law	ENE4607 Environmental risk assessment

* For students undertaking the Environmental process engineering stream.
** For students undertaking the Water and land management or Transport and the built environment streams

Level 1 Science units:

Select two pairs of science units from:

- ASP1010 Earth to cosmos – introductory astronomy and ASP1022 life and the universe
- ATS1310 Extreme earth: natural hazards and human vulnerability and ATS1301 Australian physical environments: Evolution, status and management or ATS1309 The global challenge
- BIO1011 Biology I and BIO1022 Biology II
- CHM1011 chemistry I or CHM1061 Chemistry I advanced, plus CHM1022 chemistry II or CHM1052 Chemistry II advanced
- ESC1011 Planet earth: our place in the universe and ESC1022 Planet earth; Surface processes
- FIT1029 Algorithmic problem solving and FIT1040 programming fundamentals

PHS1011 Physics (or PHS1080 Foundation physics) and PHS1022 Physics

- STA1010 Statistical methods for science and MAT1830 Discrete mathematics for computer science

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Environmental Stream Electives:

Students complete two electives from one of the following streams:

Environmental process engineering:
CHE3161 Chemistry and chemical thermodynamics
CHE3162 process control
CHE3164 Reaction engineering
CHE3265 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

Water and land management:
CIV2207 computer and water systems modelling
CIV3247 Geomechanics II
CIV3204 Engineering investigations
CIV4248 Ground hazards engineering
CIV4261 Integrated urban water management
CIV2226 Design of concrete and masonry structure
CIV4268 Water resources management
ENE4604 Environmental project B
MTE4593 Materials and environment
MTE4599 Materials for energy technologies

Transport and the built environment:
CIV2206 Mechanics of solids
CIV2225 Design of steel and timber 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

Notes:

Credit points	Unless specified, all units are worth 6 credit points **Bachelor of Environmental Engineering** 22 units x 6cp = **Total of 132 credit points** **Bachelor of Science** 18 units x 6cp = **Total of 108 credit points** **(Total: 240cp)**
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	5 years full-time, 10 years part-time
Time limit	10 years. Students have ten years in which to complete this award from the time they commence first year. Periods of intermission are counted as part of the ten years.
Course advice	www.eng.monash.edu.au/current-students/course-advice.html http://monash.edu/science/current/undergraduate/help/
Monash handbook	Students should follow the course requirements 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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