

Bachelor of Engineering (Environmental) (Honours)

Mapping to Engineers Australia Professional Engineering Competencies

Listed below is the award's Program of Study and significant sequences/alternatives. Electives, including 4th year electives, are generally not listed as students cannot be guaranteed to take specific topics. The "Worst Case" row indicates the pathological worst case in terms of sequences and electives.

BLOOM'S REVISED TAXONOMY R = Remembering (Knowledge) U = Understanding (Comprehension) A = Applying N = Analysing E = Evaluating C = Creating (Synthesis)		
Year	Core Topic Code and Name	Sequence
1	EASC1101 Earth and Environmental Sciences (4.5 units)	Core
1	ENGR1401 Professional Skills (4.5 units)	Core
1	ENGR1711 Engineering Design (4.5 units)	Core
1	ENGR1722 Engineering Physics and Materials (4.5 units)	Core
1	ENGR1732 Engineering Mechanics (4.5 units)	Core
1	MATH1121 Mathematics 1A (4.5 units)	Core
1	MATH1122 Mathematics 1B (4.5 units)	Core
1	STEM1002 Introduction to Geographical Information Systems (4.5 units)	Core
2	ENGR1201 Electronics (4.5 units)	Core
2	ENGR1721 Engineering Programming (4.5 units)	Core
2	ENGR2711 Engineering Mathematics (4.5 units)	Core
2	ENGR2741 Mechanics and Structures (4.5 units)	Core
2	ENGR2751 Fluid Mechanics (4.5 units)	Core
2	ENGR2832 Engineering Geology and Geomechanics (4.5 units)	Core
2	ENGR2882 Waste Management (4.5 units)	Core
2	ENVS2761 Hydrology (4.5 units)	Core
3	ENGR3704 Project Management for Engineering and Science (4.5 units)	Aust
3	ENGR3750 Workplace Preparation (0 units)	Core
3	ENGR3851 Hydraulics and Water Engineering (4.5 units)	Int
3	ENGR3901 Sustainable Engineering (4.5 units)	Core
3	GEOG3040 Environmental Impact Assessment (4.5 units)	Core
3	STEM2001 Remote Sensing for all Disciplines (4.5 units)	Core
3	ENGR3700 Engineering Practicum (13.5 units)	Core
3	ENGR3710 International Engineering Practicum (13.5 units)	Core
4	ENGR7700 Honours Thesis (18 units)	Core
4	ENGR7872 Advanced Infrastructure Design: Geotechnical and Water Engi	Core
4	ENGR7971 Advanced Environmental Engineering Design (4.5 units)	Core
4	ENGR9742 Systems Engineering (4.5 units)	Core

1. KNOWLEDGE AND SKILL BASE						2. ENGINEERING APPLICATION ABILITY				3. PROFESSIONAL AND PERSONAL ATTRIBUTES					
1.1. Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline.	1.2. Conceptual understanding of the, mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline.	1.3. In-depth understanding of specialist bodies of knowledge within the engineering discipline.	1.4. Discernment of knowledge development and research directions within the engineering discipline.	1.5. Knowledge of contextual factors impacting the engineering discipline.	1.6. Understanding of the scope, principles, norms, accountabilities and bounds of contemporary engineering practice in the specific discipline.	2.1. Application of established engineering methods to complex engineering problem solving.	2.2. Fluent application of engineering techniques, tools and resources.	2.3. Application of systematic engineering synthesis and design processes.	2.4. Application of systematic approaches to the conduct and management of engineering projects.	3.1. Ethical conduct and professional accountability	3.2. Effective oral and written communication in professional and lay domains.	3.3. Creative, innovative and pro-active demeanour.	3.4. Professional use and management of information.	3.5. Orderly management of self, and professional conduct.	3.6. Effective team membership and team leadership.
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