

AQF LEVEL	AQF LEVEL 9 CRITERIA –		PROGRAM LEARNING OUTCOMES
MASTERS DEGREE (COURSEWORK)			
PURPOSE	The Masters Degree (Coursework) qualifies individuals who apply an advanced body of knowledge in a range of contexts for professional practice or scholarship and as a pathway for further learning.		
KNOWLEDGE	<p>Graduates of a Masters Degree (Coursework) will have:</p> <ul style="list-style-type: none"> ▪ a body of knowledge that includes the understanding of recent developments in a discipline and/or area of professional practice ▪ knowledge of research principles and methods applicable to a field of work and or learning 	<p>Graduates of the Master of Environmental Engineering will have:</p> <ul style="list-style-type: none"> ▪ an advanced and in depth understanding of a complex body of the knowledge required to find environmental engineering solutions to current and emerging issues related to waste, water, air and soil. They will have an appropriate depth of integrated understanding of specialist knowledge in environmental stewardship as well as in leading and managing complex environmental problems through engineering solutions. ▪ knowledge of research principles and methods applicable to their application of environmental engineering. 	
SKILLS	<p>Graduates of a Masters Degree (Coursework) will have:</p> <ul style="list-style-type: none"> ▪ cognitive skills to demonstrate mastery of theoretical knowledge and to reflect critically on theory and professional practice or scholarship ▪ cognitive, technical and creative skills to investigate, analyse and synthesise complex information, problems, concepts and theories and to apply established theories to different bodies of knowledge or practice ▪ cognitive, technical and creative skills to generate and evaluate complex ideas and concepts at an abstract level 	<p>Graduates of the Master of Environmental Engineering will have:</p> <ul style="list-style-type: none"> ▪ cognitive skills to critically analyse, reflect on and synthesise complex information, problems, concepts and theories associated with environmental engineering applications including the skills to research and apply established theories to a body of knowledge or practice towards finding new and alternative solutions to sustainably solving a range of complex and diverse environmental engineering problems and issues using a variety of methods, including specialised engineering methods ▪ cognitive, technical and creative skills to able to master a theoretical knowledge of technical and management skills to enable design, evaluation, implementation, analysis and theory of current and emerging environmental problems to find sustainable solutions taking into account these technical, social and economic aspects of environmental engineering ▪ cognitive, technical and communication skills to identify, interpret and analyse stakeholder needs, establish priorities and the goals, constraints and uncertainties of the system (social, cultural, legislative, environmental, business etc.), using systems thinking, while recognising ethical implications of professional practice 	

**APPLICATION OF
KNOWLEDGE &
SKILLS**

<ul style="list-style-type: none"> ▪ communication and technical research skills to justify and interpret theoretical propositions, methodologies, conclusions and professional decisions to specialist and non-specialist audiences ▪ technical and communication skills to design, evaluate, implement, analyse and theorise about developments that contribute to professional practice or scholarship 	<ul style="list-style-type: none"> ▪ communication and technical research skills to communicate to a high level, both verbally and in a variety of written forms, engineering theory and practice and the interpretation and justification of environmental engineering solutions to complex problems to a range of specialist and non-specialist audiences ▪ technical and communication skills to initiate, plan, coordinate, implement and evaluate complex environmental engineering problems and issues, as an effective member or leader of diverse teams, using basic and/or specialised tools and practices of formal project management
<p>Graduates of a Masters Degree (Coursework) will demonstrate the application of knowledge & skills:</p> <ul style="list-style-type: none"> ▪ with creativity and initiative to new situations in professional practice and/or for further learning ▪ with high level personal autonomy and accountability ▪ to plan and execute a substantial research-based project, capstone experience and/or piece of scholarship 	<p>A graduate of the Master of Environmental Engineering will demonstrate the application of knowledge and skills:</p> <ul style="list-style-type: none"> ▪ using creativity and innovativeness in finding sustainable solutions to new developments in the environmental engineering field. Students will be capable of obtaining and investigating through applying established theories, an analysis and evaluation of a variety of data sources at a high and complex level and to apply problem solving design and decision making methodologies to develop components, systems and or processes to meet specified requirements ▪ by critically and sustainably assessing, interpreting and developing innovative approaches to the solving of environmental problems to suit different contexts ▪ with high level personal autonomy and accountability managing competing demands and prioritising whilst planning and executing substantial research-based projects in various fields of environmental engineering and showing expert judgement, adaptability and taking responsibility for all aspects of the work or function of others when required with high levels of personal autonomy and accountability ▪ to plan and execute a substantial research-based environmental engineering project ▪ to research and apply appropriate theories, models and tools for critically analysing and interpreting the relevant environmental reform, innovation, change, planning and management whilst being able to reflect critically on professional practice and scholarship.