

AQF LEVEL	AQF LEVEL 8 CRITERIA – GRADUATE CERTIFICATE		PROGRAM LEARNING OUTCOMES
PURPOSE	The Graduate Certificate qualifies individuals who apply a body of knowledge in a range of contexts to undertake professional/highly skilled work and as a pathway for further learning.		
KNOWLEDGE	Graduates of a Graduate Certificate will have specialised knowledge within a systematic and coherent body of knowledge that may include the acquisition and application of knowledge and skills in a new or existing discipline or professional area	<ul style="list-style-type: none"> ▪ Building services engineers work closely with other construction professionals such as architects, structural engineers and quantity surveyors. ▪ Building services engineers influence the architectural design of building, in particular facades, in relation to energy efficiency and indoor environment, and can integrate local energy production (e.g. façade-integrated photovoltaics) or community-scale energy facilities (e.g. district heating). ▪ Building services engineers therefore play an important role in the design and operation of energy-efficient buildings (including green buildings, passive houses, and Plus-houses, and Zero-energy buildings). With buildings accounting for about a third of all carbon emissions and over a half of the global electricity demand, building services engineers play an important role in the move to a low-carbon society, hence mitigate global warming. 	

SKILLS

Graduates of a Graduate Certificate will have:

- cognitive skills to review, analyse, consolidate and synthesise knowledge and identify and provide solutions to complex problems
- cognitive skills to think critically and to generate and evaluate complex ideas
- specialised technical and creative skills in a field of highly skilled and/or professional practice
- communication skills to demonstrate an understanding of theoretical concepts
- communication skills to transfer complex knowledge and ideas to a variety of audiences

- critically analyse, reflect on and synthesise complex information, problems, concepts and theories associated with Building Services applications;
- research and apply established theories to a body of knowledge or practice towards finding new solutions to existing and emerging Building Services problems;
- develop technical and management skills to design, evaluate, implement, analyse and theorise current and emerging Building Services problems to find sustainable solutions taking into account technical, social and economic aspects;
- communicate Building Services solutions to specialist and non-specialist audiences;
- be creative and innovative in finding sustainable solutions to new developments in the Building Services field;
- plan and execute a substantial research-based project in various fields of Building Services; and demonstrate autonomy, expert judgement, adaptability and responsibility as a professional Building Services manager or engineer.

**APPLICATION OF
KNOWLEDGE &
SKILLS**

Graduates of a Graduate Certificate will demonstrate the application of knowledge and skills:

- to make high level, independent judgements in a range of technical or management functions in varied specialised contexts
- to initiate, plan, implement and evaluate broad functions within varied specialised technical and/or creative contexts
- with responsibility and accountability for personal outputs and all aspects of the work or function of others within broad parameters

Graduates will gain the knowledge and skill base required to research, design, plan, or perform engineering duties in the Building Services (Engineering) discipline. They will not only gain the technical knowledge but also the competence in incorporating social, ethical and economic aspects into the technical solutions.

The ability to be innovative and creative, with critical judgement is one of the key attributes required for the Building Services profession.

Building Services solutions demand innovation, creation and judgement to find solutions that are not only technically feasible but also satisfy the social, cultural, economic and financial aspects. Throughout the program heavy emphasis will be placed upon gaining these skills through effective learning strategies and assessment processes.