EB12.1.1   Purpose of the qualification

The purpose of the qualification is to develop an intellectual with advanced abilities in applying fundamental engineering sciences or related inter-disciplinary principles to specific problems of society at large. One of the main objectives in this process is to develop an advanced capability to conduct fundamental engineering research of an inter/intra-disciplinary nature independently. It also promotes a lifelong learning approach.

EB12.1.2   Qualification outcomes

Exit level outcomes:
The qualified student will be able to:

- Identify, assess, formulate, interpret, analyse and solve research and development problems creatively and innovatively by applying relevant inter-disciplinary knowledge in the chosen field of research.
- Plan and manage research projects demonstrating fundamental knowledge, understanding and insight into the principles, methodologies and concepts that constitute socially responsible (to local and other communities) research/development in the chosen field of research practice.
- Work effectively, individually or with others, as a member of a team, group, organisation and the community or in multi-disciplinary environments in the chosen field of interdisciplinary research.
- Organise and manage him/herself and his/her activities responsibly, effectively, and ethically, accept responsibility within his/her limits of competence, and exercise judgement based on knowledge and expertise, pertaining to the field of research.
- Plan and conduct applicable levels of investigation, research and/or experiments by applying appropriate theories and methodologies and perform appropriate data analysis and interpretation.
- Communicate effectively, both orally and in writing, with specifically research audiences and the community at large, in so far as they are affected by the research, using appropriate structure, style and graphical support.
- Use and assess appropriate research methods, skills, tools and information technology effectively and critically in research/development practice and show an understanding and a willingness to accept responsibility for the impact of inter-disciplinary research/development activities on society and the environment.
- Perform synthesis of systems, works, products or processes as a set of related systems and assess their social, legal, health, safety and environmental impact and benefits, where applicable, in the chosen field of inter-disciplinary research.
- Employ various learning strategies and skills to master outcomes required for preparing him/herself to engage in continuous learning, to keep abreast of knowledge and skills required in the interdisciplinary field.
- Participate as a responsible citizen in the life of local, national and global communities by acting ethically in the chosen field of research.
- Demonstrate, where applicable, cultural and aesthetic sensitivity across a range of social contexts in the execution of research/development activities.
- Explore, where applicable, education and career opportunities in research/development.
- Organise and develop entrepreneurial opportunities through technical research, development and/or managerial skills.

EB12.1.3   Admission requirements and selection criteria

An approved four-year bachelor's degree in Engineering or similar approved degree at honours level.
Final admission to the programme will only be granted upon successful presentation of a research seminar six months after enrolment. Research topics must also be accepted and approved by the supervisors in the Faculty.

EB12.1.4 Conferment of the degree
The MPhil: Electrical and Electronic degree will be conferred on students who have completed the research seminar and dissertation successfully.

EB12.1.5

Curriculum

First Year

CODE	MODULE	CODE	MODULE

First semester		Second semester	
M6E0109	Dissertation	M6E0209	Dissertation

RESEARCH TIME: 100%