

EB11.18.1 Purpose of the qualification

This programme is aimed to develop an intellectual with advanced abilities in applying fundamental engineering technologies or related inter-disciplinary principles to develop methods, strategies and designs within all mining related sectors in Africa and to develop an advanced capability to conduct fundamental research of an inter-disciplinary nature independently. The purpose of this programme in Sustainable Mining master's degree is to provide a programme to all persons involved within the mining value chain, from exploration to rehabilitation, to develop research and innovative practices to develop sustainable mining practices within the African continent. The qualifier "sustainable mining" will address issues around the increasing complexity of mining at great depths and the decline of mineral deposits that can be mined with minimal effort. This course will propose to support the UJ strategic objectives including excellence in research and innovation and improving the international profile in global excellence and stature.

EB11.18.2 Qualification outcomes

Exit level outcomes:

The qualified student will be able to:

On completion of the dissertation a student should display the development of a research proposal to a point where a dissertation can be completed to address the specific sustainable mining practices within the African continent. On completion of the research dissertation addressing specific designs, strategies or practices that will improve sustainability in mining, the graduate will be able to :

1. Identify, assess, formulate, interpret, analyse and solve problems within the development of sustainable mining research problems creatively and innovatively by applying relevant inter-disciplinary knowledge in the chosen field of research.
2. Plan and manage sustainable mining policies and strategies in research projects, demonstrating inter-disciplinary 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.
3. Organise and manage him/herself and his/her activities responsibly, effectively and ethically, accept take responsibility within his/her limits of competence, and exercise judgement based on knowledge and expertise, pertaining to the field of research.
4. Plan and conduct applicable levels of investigation, research and/or experiments by applying appropriate theories and methodologies and perform appropriate data analysis and interpretation.
5. 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 data analysis and interpretation.
6. Participate as a responsible citizen in the life of local, national and global communities by acting ethically in the chosen field of research.
7. Demonstrate, where applicable, cultural and aesthetic sensitivity across a range of social contexts in the execution of engineering management research/development activities.

EB11.18.3 Admission requirements and selection criteria.

Bachelor Honours Degree or a relevant Postgraduate Diploma at NQF level 8. A relevant bachelor's qualification with appropriate industry experience and subsequent recognised industry qualifications such as the Government Certificate of Competency may also be recognised as meeting the minimum entry requirement to the proposed master's degree programme. The university RPL will be applied.

EB11.18.5 Curriculum

CODE	MODULE	CODE	MODULE
First semester		Second semester	
1	DISSERTATION: SUSTAINABLE MINING (Research : 1)	2	DISSERTATION: SUSTAINABLE MINING (Research : 1)
1	DISSERTATION: SUSTAINABLE MINING (Research : 1)	2	DISSERTATION: SUSTAINABLE MINING (Research : 1)

RESEARCH TIME: 100%