University of Pretoria Yearbook 2017

Mine design and research 422 (PMZ 422)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	42.00
Programmes	BEng Mining Engineering
	BEng Mining Engineering
	BEng Mining Engineering ENGAGE
Prerequisites	PMY 410, PSZ 410, PEE 410. PNB 400, Finalists only
Contact time	4 lectures per week
Language of tuition	Module is presented in English
Academic organisation	Mining Engineering
Period of presentation	Semester 2

Module content

This module entails the completion of an engineering project from concept to delivery. The student must demonstrate mastery of a mining engineering project. The module focuses on the formulation of a mining engineering problem, the development of appropriate extraction methodologies, project planning and management and then completion of a technical project of a given nature, scope and complexity.
Students are required to design a mine at the conceptual business case level. Students are given a surface plan and borehole data from which they have to design a mine in teams of 3 – 5 students. They have access to a mining engineer in industry to assist with advice. The design has to incorporate a market analysis, layout design, working method, surface layout, environmental impacts and financial analysis. The design is submitted in book form and each team member has to do a presentation of the design.