

University of Pretoria Yearbook 2021

Surface mining 311 (PMY 311)

Qualification Undergraduate

Faculty Faculty of Engineering, Built Environment and Information Technology

Module credits 16.00

NQF Level 07

Programmes BEng Mining Engineering

BEng Mining Engineering ENGAGE

Prerequisites PMY 220 GS

Contact time 2 tutorials per week, 3 lectures per week

Language of tuition Module is presented in English

Department Mining Engineering

Period of presentation Semester 1

Module content

Surface mining methods: Introduction, classification of ore reserves and terminology. Earth moving: Loading shovels and methods, haulage trucks, productivity and tires, introduction to bucket wheel excavators, conveyor systems and in-pit crushers, in-pit crushing-conveying system, application of draglines and terminology. Introduction to mine planning, mine development phases, block modelling, methods of sequencing, stripping ratios and breakeven ratios. Introduction to mining environment, rehabilitation and closure, integrated environmental management, environmental impact studies, water management and rehabilitation planning and costing.

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