

University of Pretoria Yearbook 2019

Mine ventilation engineering 410 (PEE 410)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
Programmes	BEng Mining Engineering BEng Mining Engineering Engage
Prerequisites	MTV 310, Finalists only
Contact time	3 lectures per week, 1 tutorial per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Mining Engineering
Period of presentation	Semester 1

Module content

Mine ventilation methods; primary and secondary ventilation methods, ventilation strategies for coal and hard rock mining environments including base metal mines. Mine development ventilation methods, mine air control, different types of fans including fan performances and air dilution calculations. Refrigeration: Elementary refrigeration principles, including concepts and methods, chilled water systems, including cooling distribution methods. Elementary mine ventilation planning, basic planning parameters and elementary mine ventilation economics and the impact of incorrect design and applications on safety and health. Mine gases, their origin and gas/coal dust explosions. Aspects of the Mine Health and Safety act are also dealt with.

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