

# University of Pretoria Yearbook 2018

## Mine ventilation engineering 410 (PEE 410)

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| <b>Qualification</b>          | Undergraduate   |
| <b>Faculty</b>                | <a href="#">Faculty of Engineering, Built Environment and Information Technology</a>      |
| <b>Module credits</b>         | 16.00   |
| <b>Programmes</b>             | <a href="#">BEng Mining Engineering</a><br><a href="#">BEng Mining Engineering ENGAGE</a> |
| <b>Prerequisites</b>          | MTV 310, Finalists only   |
| <b>Contact time</b>           | 1 tutorial per week, 2 practicals per week, 3 lectures per week                           |
| <b>Language of tuition</b>    | Module is presented in English  |
| <b>Department</b>             | Mining Engineering  |
| <b>Period of presentation</b> | 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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