

University of Pretoria Yearbook 2018

Boundary layer meteorology 811 (AQM 811)

Qualification Postgraduate **Faculty** Faculty of Natural and Agricultural Sciences Module credits 15.00 **Programmes** MSc Air Quality Management (Coursework) **Prerequisites** No prerequisites. **Contact time** 1 lecture per week Language of tuition Module is presented in English **Department** Geography Geoinformatics and Meteorology Period of presentation Year

Module content

Introduction to global circulation and South African weather and climate. Mathematical functions and atmospheric balance laws. Stability and mixing heights. The atmospheric boundary layer over urban and rural areas. Turbulence. Earth's energy budget. Transfer and exchange of energy. Introduction to atmospheric and chemical dispersion modelling. Practical modelling of air pollution: Box models, Gausian puff or plume models, stochastic models, trajectory models.

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