

University of Pretoria Yearbook 2021

Seasonal and climate modelling 703 (WKD 703)

Qualification	Postgraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	12.00
NQF Level	08
Programmes	BScHons Meteorology
Prerequisites	No prerequisites.
Contact time	1 discussion class per week, 1 lecture per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1 or Semester 2

Module content

Fundamentals of seasonal forecasting. The El Niño/Southern Oscillation. Empirical orthogonal functions. Canonical correlation analysis. Empirical forecast models practical. Sea-surface temperature models. Fully coupled and two-tiered general circulation modelling. Dynamical and empirical downscaling techniques. Significance testing using Monte Carlo techniques. Modelling pitfalls. User application forecasting. Projections of decadal and multi decadal climate anomalies.

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