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# University of Pretoria Yearbook 2019

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## Seasonal and climate modelling 703 (WKD 703)

<b>Qualification</b>	Postgraduate
<b>Faculty</b>	<a href="#">Faculty of Natural and Agricultural Sciences</a>
<b>Module credits</b>	12.00
<b>Programmes</b>	<a href="#">BScHons Meteorology</a>
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	1 discussion class per week, 1 lecture per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Geography Geoinformatics and Meteorology
<b>Period of presentation</b>	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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