



University of Pretoria Yearbook 2022

Synoptic-scale circulation dynamics and vorticity in mid-latitudes 352 (WKD 352)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	18.00
NQF Level	07
Programmes	BSc (Meteorology) BSc (Applied Mathematics) BSc (Geography and Environmental Science) BSc (Physics)
Prerequisites	WKD 261 and WKD 263.
Contact time	1 tutorial per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Quarter 3

Module content

Scale analyses and simplification of the basic equations. The geostrophic, thermal and gradient wind. The vorticity equation and divergence. Potential vorticity. Vertical motion and surface pressure tendency. Vorticity in barotropic fluids. Vorticity and divergence fields in a present and future climate

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