ATOC90013 Atmospheric Modelling

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: March, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 24 hours of lectures. Total Time Commitment: 170 hours
Prerequisites:	**Subject** / **Study Period Commencement:** / **Credit Points:** ATOC30004 Dynamical Meteorology and Oceanography / Semester 1 / 12.5
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability
Coordinator:	Assoc Prof Kevin Walsh
Contact:	kevin.walsh@unimelb.edu.au
Subject Overview:	The aim of this unit is to describe the design of global atmospheric models as they are used in Numerical Weather Prediction, seasonal prediction and climate simulation. The unit aims to provide a basic understanding of all aspects of global atmospheric modelling. It will describe modelling techniques required to apply the fundamental equations that govern atmospheric flow in the settings of a modern General Circulation Model.
Learning Outcomes:	On completion of this subject students will be able to: # explain the basic aspects of atmospheric modelling, including an understanding of how the basic equations are represented in models; # analyse and plot model output; # understand how processes are parameterized withing models.
Assessment:	Four assignments collectively totalling 3000 words or equivalent, including a 10-minute presentation, programming exercises and problem sets, due in weeks 3, 4, 5 and 6 (50%) A two-hour final examination due one week after the end of the teaching period (50%)
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees

Generic Skills:	Exercise critical judgement; undertake rigorous and independent thinking; adopt a problem-solving approach to new and unfamiliar tasks; develop high-level written report and/or oral presentation skills.
Related Course(s):	Master of Science (Earth Sciences)
Related Majors/Minors/ Specialisations:	Earth Sciences Honours Program - Earth Sciences