



The University of Southern Queensland

## Course specification

The current and official versions of the course specifications are available on the web at <http://www.usq.edu.au/coursespecification/current>. Please consult the web for updates that may occur during the year.

### Description: Introductory Climatology

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
CLI	1110	74238	1, 2008	EXT	1.00	Toowoomba

<b>Academic group:</b>	FOSCI
<b>Academic org:</b>	FOS002
<b>Student contribution band:</b>	2
<b>ASCED code:</b>	010701

## STAFFING

Examiner: Joachim Ribbe

## RATIONALE

The study of climatology is recognised as an important inclusion for any student intent on understanding the bases and impacts of climate variability that have large effects in many world regions. Knowledge of the concepts of climatology is fundamental to any broad appreciation of applied climatology and for any student proceeding to do detailed statistical analyses and modelling in climatology.

## SYNOPSIS

This course encourages students to appreciate the scope of the study of climate in both a global and local context. The course provides a basic understanding of the composition of the climate system, an understanding of key physical processes, an introduction to major (non-seasonal) variations in atmospheric and oceanic circulation systems such as El Nino, La Nina, the Quasi-Biennial Oscillation (QBO) and associated feedback processes. The course also provides an introduction to some aspects of applied climatology, including agricultural climatology. Access to the internet is required.

## OBJECTIVES

On successful completion of this course students will be able to:

1. effectively describe general circulation systems, regional and local climate mechanisms (Exercises 1-5);
2. apply basic principles of physics to the areas of the atmospheric structure, local circulation systems, and the basics principles of atmosphere and ocean dynamics (Exercises 6-10);
3. effectively describe the major non-seasonal climate mechanisms, especially the El Nino/Southern Oscillation (Exam);
4. effectively describe the practical benefits of climate studies in areas as agricultural climatology and applications (Exam).

## TOPICS

	Description	Weighting (%)
1.	The global setting	10.00
2.	Structure of the atmosphere and ocean	10.00
3.	Horizontal motion of the atmosphere and ocean	10.00
4.	Synoptic circulations	20.00
5.	Climate of Australia	10.00
6.	Non-seasonal variations in climate	20.00
7.	Introduction to applied climatology	20.00

## TEXT and MATERIALS required to be PURCHASED or ACCESSED

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

Barry, R G and Chorley, R J 2003, *Atmosphere, Weather and Climate*, 8th edn, Routledge, London.

Sturman, A P and Tapper, N J 2005, *The Weather and Climate of Australia and New Zealand*, 2nd edn, Oxford University Press, Melbourne.

## REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

American Meteorological Society , Abstracts and Table of Contents, *Journal of Physical Oceanography*,

(available through USQ Library's homepage)

American Meteorological Society , , *Journal of Climate*, QCCA Climate Library.

Linacre, E and Hobbs, J 1977, *The Australian Climatic Environment*, Wiley, Brisbane.

Partridge, I (ed) 1994, *Will it Rain? The Effects of the Southern Oscillation and El Nino on Australia*, 2nd edn, Dept of Primary Industries, Brisbane.

(551.6594 WIL also QCCA Climate Library or Client Services Section, DPI, Tor Street, Toowoomba)

Royal Meteorological Society , , *International Journal of Climatology*, QCCA Climate Library.

Springer Verlag , Abstracts and Table of Contents, *Climate Dynamics*, Germany.

(available through USQ Library's homepage.)

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Directed Study	52.00
Examinations	2.00
Private Study	115.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
EXERCISES 1-5	100.00	20.00	28 Mar 2008
EXERCISES 6-10	100.00	20.00	23 May 2008
2 HR RESTRICTED EXAM	100.00	60.00	END S1 (see note 1)

### NOTES

1. Examination dates will be available during the Semester.

## IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:  
It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.
- 2 Requirements for students to complete each assessment item satisfactorily:  
To satisfactorily complete an assessment item a student must achieve at least 50% of the marks or a grade of at least C-. Students do not have to satisfactorily complete each assessment item to be awarded a passing grade in this course. Refer to Statement 4 below for the requirements to receive a passing grade in this course.
- 3 Penalties for late submission of required work:  
If students submit assignments after the due date without (prior) approval of the examiner then a penalty of 5% of the total marks gained by the student for the assignment may apply for each working day late up to ten working days at which time a mark of zero may be recorded.. No assignments will be accepted after model answers have been posted.
- 4 Requirements for student to be awarded a passing grade in the course:  
To be assured of receiving a passing grade a student must achieve at least 50% of the total weighted marks available for the course.
- 5 Method used to combine assessment results to attain final grade:  
The final grades for students will be assigned on the basis of the weighted aggregate of the marks obtained for each of the summative assessment items in the course.
- 6 Examination information:  
In a Restricted Examination, candidates are allowed access to specific materials during the examination. The only materials that candidates may use in the restricted examination for this course are: writing materials (non-electronic and free from material which could

give the student an unfair advantage in the examination); calculators which cannot hold textual information (students must indicate on their examination paper the make and model of any calculator(s) they use during the examination; English translation dictionaries (but not technical dictionaries); Translation dictionary. With the Examiner's approval, candidates may, take an appropriate non- electronic translation dictionary into the examination. This will be subject to perusal and, if it is found to contain annotations or markings that could give the candidate an unfair advantage, it may be removed from the candidate's possession until the appropriate disciplinary action is completed.

- 7 Examination period when Deferred/Supplementary examinations will be held:  
Any Deferred or Supplementary examinations for this course will be held during the next examination period.
- 8 University Regulations:  
Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL <http://www.usq.edu.au/corporateservices/calendar/part5.htm> or in the current USQ Handbook.

## **ASSESSMENT NOTES**

- 9 The due date for assessments is the date by which a student must despatch an assignment to the USQ. The onus is on the student to provide proof of the despatch date if requested by the Examiner. Students must retain a copy of each item of assessment. This must be produced within 48 hours if required by the Examiner.