COURSE OUTLINE

# ENS242 Weather and Climate

**School:** School of Science, Technology and Engineering

2026 | Trimester 2

UniSC Sunshine Coast
UniSC Moreton Bay

BLENDED LEARNING

Most of your course is on campus but you may be able to do some components of this course online.

*Please go to unisc.edu.au for up to date information on the teaching sessions and campuses where this course is usually offered.*

## 1. What is this course about?

### 1.1. Description

This course provides you with a practical introduction and overview of meteorology and climate. The nature of the physical processes responsible for changes in daily weather will be discussed, including links between oceans, atmosphere and land. You will gain a better understanding of the nightly television weather charts and reports, and an improved understanding of important issues including climate change and the impacts of severe weather. The course will focus on Australian and regional Queensland conditions.

### 1.2. How will this course be delivered?

| ACTIVITY | HOURS | BEGINNING WEEK | FREQUENCY |
|---|---|---|---|
| **BLENDED LEARNING** | | | |
| **Learning materials** – Asynchronous learning materials | 1hr | Week 1 | 12 times |
| **Tutorial/Workshop 1** – On campus workshop | 1hr | Week 1 | 12 times |
| **Laboratory 1** – on-campus computer lab | 2hrs | Week 1 | 12 times |

### 1.3. Course Topics

Meteorology; climate change; global warming; greenhouse gases; marine and coastal weather and forecasts; severe weather; rainfall, floods and droughts, waves, currents and surf; weather forecasts.

## 2. What level is this course?

200 Level (Developing)

Building on and expanding the scope of introductory knowledge and skills, developing breadth or depth and applying knowledge and skills in a new context. May require pre-requisites where discipline specific introductory knowledge or skills is necessary. Normally, undertaken in the second or third full-time year of an undergraduate programs.

## 3. What is the unit value of this course?

12 units

## 4. How does this course contribute to my learning?

| COURSE LEARNING OUTCOMES | | GRADUATE QUALITIES |
|---|---|---|
| On successful completion of this course, you should be able to... | | Completing these tasks successfully will contribute to you becoming... |
| 1 | Recognise, understand and explain key concepts in weather and climate, and the links to Earth System Science | Knowledgeable |
| 2 | Identify and collect weather/climate data from different sources including the Internet | Empowered |
| 3 | Critically assess sources and types of weather/climate data and trends | Creative and critical thinker |
| 4 | Understand, describe and present weather/climate data and information to a non-professional audience | Empowered |
| 5 | Evaluate climate data in relation to possible impacts on the Earth and on humanity | Sustainability-focussed |

## 5. Am I eligible to enrol in this course?

Refer to the UniSC Glossary of terms for definitions of “pre-requisites, co-requisites and anti-requisites”.

### 5.1. Pre-requisites

Not applicable

### 5.2. Co-requisites

Not applicable

### 5.3. Anti-requisites

Not applicable

### 5.4. Specific assumed prior knowledge and skills (where applicable)

Computer and internet literate; access to television and internet; access to, and use of, MS Word, PowerPoint and Excel.

### 5.5. Microcredential Information

Not applicable

## 6. How am I going to be assessed?

### 6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

### 6.2. Details of early feedback on progress

Several of the tutorials include group tasks that are reviewed to provide formative feedback to the students.

## 6.3. Assessment tasks

| DELIVERY MODE | TASK NO. | ASSESSMENT PRODUCT | INDIVIDUAL OR GROUP | WEIGHTING % | WHAT IS THE DURATION / LENGTH? | WHEN SHOULD I SUBMIT? | WHERE SHOULD I SUBMIT IT? |
|---|---|---|---|---|---|---|---|
| All | 1a | Written Piece | Individual | 10% | Word document length as advised in canvas | Week 8 | Online Assignment Submission with plagiarism check |
| All | 1b | Quiz/zes | Individual | 10% | 40 minutes | Week 8 | Online Test (Quiz) |
| All | 2 | Oral | Group | 30% | ~20 min group presentation | Week 11 | Online Assignment Submission with plagiarism check |
| All | 3 | Examination - Centrally Scheduled | Individual | 50% | 2 hours | Exam Period | Exam Venue |

### All - Assessment Task 1a: Group forecasting exercise

| | |
|---|---|
| GOAL: | Create a team product which integrates everything taught so far in the course. |
| PRODUCT: | Written Piece |
| AUTHORSHIP STATEMENT: | |
| FORMAT: | Written weather forecast for Southeast Queensland (including rationale), undertaken during Week 8 Lab. Group Word document submitted online at end of class. |
| CRITERIA: | **No.** — **Learning Outcome assessed**<br>1 Assessed on a written forecast justification submitted at the end of class. — 1 2 3 |
| GENERIC SKILLS: | Communication, Collaboration, Problem solving, Applying technologies, Information literacy |

### All - Assessment Task 1b: Mid-term Quiz

| | |
|---|---|
| GOAL: | Review understanding of course material to date, identify weak areas which need work. |
| PRODUCT: | Quiz/zes |
| AUTHORSHIP STATEMENT: | |
| FORMAT: | Online multi-choice quiz |
| CRITERIA: | **No.** — **Learning Outcome assessed**<br>1 Assess skills and knowledge on Weather and Climate. — 1 |
| GENERIC SKILLS: | Problem solving, Applying technologies, Information literacy |

**All - Assessment Task 2:** Weather/climate project presentation

| | |
|---|---|
| **GOAL:** | A 20-minute literature-sourced group presentation about some aspect(s) of weather/climate, and how it relates to a chosen topic of interest. |
| **PRODUCT:** | Oral |
| **AUTHORSHIP STATEMENT:** | |
| **FORMAT:** | Oral group presentation to class, including questions, with slides and references submitted to Canvas. |
| **CRITERIA:** | **No.** — **Learning Outcome assessed**<br>1 — Demonstrated ability to research, prepare and deliver a professional presentation through co-ordinated group work, which showcases good understanding without reliance on written aids or artificial intelligence resources. — 2 3 4 |
| **GENERIC SKILLS:** | Communication, Organisation, Information literacy |

**All - Assessment Task 3:** Final Examination

| | |
|---|---|
| **GOAL:** | To consolidate and demonstrate your understanding of the key concepts, theories and practices in weather and climate science covered in this course. |
| **PRODUCT:** | Examination - Centrally Scheduled |
| **AUTHORSHIP STATEMENT:** | |
| **FORMAT:** | Two-hour online examination held during formal end-of-trimester examination period, consisting of a mixture of higher order multi-choice and short answer questions. |
| **CRITERIA:** | **No.** — **Learning Outcome assessed**<br>1 — Applying learned concepts in weather/climate science to unfamiliar scenarios — 1 4 5<br>2 — Understanding key concepts in weather/climate science — 1 4<br>3 — Explaining and/or assessing contemporary issues in weather and climate science — 3 4 5 |
| **GENERIC SKILLS:** | Problem solving, Applying technologies, Information literacy |

## 7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

## 8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

### 8.1. Prescribed text(s) or course reader

You need regular access to the resource(s) below. Many texts are available as ebooks through the Library at no additional cost.

| REQUIRED? | AUTHOR | YEAR | TITLE | EDITION | PUBLISHER |
|---|---|---|---|---|---|
| Recommended | Edward Aguado,James E. Burt | 2014 | Understanding Weather and Climate | 7th Ed | Prentice Hall |
| Recommended | C. Donald Ahrens,Robert Henson | 2015 | Meteorology Today | 11th Ed | Cengage Learning |
| Recommended | Keith Colls,Dick Whitaker,Richard Whitaker | 2012 | The Australian Weather Book | 3nd Ed. (or older editions) | Reed New Holland |
| Recommended | Andrew P. Sturman,Nigel J. Tapper | 2006 | The Weather and Climate of Australia and New Zealand | 2nd Ed. (or older edition) | Oxford University Press, USA |

### 8.2. Specific requirements

Links to relevant web pages including the Australian Bureau of Meteorology (BoM) will be provided also during tutorials. Students expected to view daily weather forecasts (TV, newspaper or internet).

## 9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the online induction training for students, and following the instructions of the University staff.

## 10. What administrative information is relevant to this course?

### 10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

### 10.2. Assessment: Additional Requirements

**Eligibility for Supplementary Assessment**

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:
(a) The final mark is in the percentage range 47% to 49.4%; and
(b) The course is graded using the Standard Grading scale

Eligibility for Supplementary Assessment Your eligibility for supplementary assessment in a course is dependent of the following conditions applying: The final mark is in the percentage range 47% to 49.4% The course is graded using the Standard Grading scale You have not failed an assessment task in the course due to academic misconduct

## 10.3. Assessment: Submission penalties

Late submissions may be penalised up to and including the following maximum percentage of the assessment task's identified value, with weekdays and weekends included in the calculation of days late:
(a) One day: deduct 5%;
(b) Two days: deduct 10%;
(c) Three days: deduct 20%;
(d) Four days: deduct 40%;
(e) Five days: deduct 60%;
(f) Six days: deduct 80%;
(g) Seven days: A result of zero is awarded for the assessment task.

The following penalties will apply for a late submission for an online examination:
Less than 15 minutes: No penalty
From 15 minutes to 30 minutes: 20% penalty
More than 30 minutes: 100% penalty

## 10.4. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching

## 10.5. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The Student Charter sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

## 10.6. General Enquiries

For course-specific questions, contact your teaching staff or Course Coordinator.

For other enquiries or to access support, please contact Student Central:

- UniSC Student Central
- UniSC Adelaide Student Central