UNSW Course Outline

GEOS1211 Earth and Environmental Science - 2024

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General Course Information

Course Code : GEOS1211
Year : 2024
Term : Term 1
Teaching Period : T1
Is a multi-term course? : No
Faculty : Faculty of Science
Academic Unit : School of Biological, Earth and Environmental Sciences
Delivery Mode : In Person
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This course investigates Earth's environment from a scientific perspective. In particular, it considers evidence throughout Earth's history to inform important environmental processes today.

Topics considered include environmental pollution, soil hydrology, and groundwater science. Students will discover the environmental and earth science context of the Kensington Campus. The geology of Sydney is investigated, and how it relates to the city's development and geoheritage. The topics are delivered through laboratory and field-based learning in the local area. The field work component occurs solely in class time and will not incur additional costs.

Course Aims

The primary aim of this course is to provide students with an understanding of the Earth's environment. The course focuses on an Earth's history perspective, introducing students to contemporary environmental processes and environmental issues. Through a blended learning approach, the course activities will enable students to describe and interpret a wide range of Earth environmental processes occurring over geological and modern day timescales.

Relationship to Other Courses

There are no pre-requisites.

This course provides you with fundamental knowledge essential for most 'GEOS' courses (those where the course code starts with GEOS) in the School of Biological, Earth and Environmental Sciences.

GEOS1211 prepares students for GEOS2131, GEOS2181, GEOS2291, GEOS2721 and GEOS2821. (It is a core compulsory course in the Earth Science majors and the Environmental Management program).

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Use an Earth history perspective to describe the Earth's environment and environmental processes.
CLO2 : Monitor and analyse fundamental features of a variety of Earth materials and landforms to identify and interpret their environmental history.
CLO3 : Analyse landscapes to interpret how their underlying geology affects human use and environmental processes.
CLO4 : Undertake field and laboratory projects using a framework of understanding environmental processes and taking an Earth history perspective.
CLO5 : Communicate field and laboratory observations of environmental and earth science processes.

Course Learning Outcomes	Assessment Item
CLO1 : Use an Earth history perspective to describe the Earth's environment and environmental processes.	• Class Tests
CLO2 : Monitor and analyse fundamental features of a variety of Earth materials and landforms to identify and interpret their environmental history.	• Field Report
CLO3 : Analyse landscapes to interpret how their underlying geology affects human use and environmental processes.	• Field Report • Class Tests
CLO4 : Undertake field and laboratory projects using a framework of understanding environmental processes and taking an Earth history perspective.	• Practical Assignments • Field Report
CLO5 : Communicate field and laboratory observations of environmental and earth science processes.	• Practical Assignments • Field Report

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

This course enables students to develop an understanding of the Earth's environment from a scientific perspective. The topics covered highlight the importance of having an Earth history perspective on contemporary environmental processes.

The course is designed to make good use of blended learning, with on-line and face-to-face delivery. On-line lectures and related self-guide learning resources are complemented by problem-based learning activities, available both on-line or face-to-face through virtual or physical field classes, and associated tutorials.

Each week, before the laboratory or field class, you will be given some materials to read on the topic that is being covered. Before the class, you will be assessed on your understanding of that topic with a short test that assesses your understanding of the reading materials. You will be required to complete the test before the laboratory or field class. There will be eight topics, four related to the field classes and four related to the lab classes. The test will occur each week that there is a laboratory or field class and each is worth 5%. Overall, the assignment is 40% of the course mark, with the marks equally weighted between the weeks (8 x 5%)

An integral part of this course is engagement in field class activities. You will be expected to submit a field report which is based on the field trip component of the course. This will assess your understanding of environmental earth science processes through field observations and

their interpretation. The assignment will require you to submit a field notebook which contains your observations and interpretation of the four field trips. The assignment is 20% of the course mark, with the marks equally weighted between the four field classes (4 x 5%)

Also integral to the course is engagement in the lab classes. You will be expected to submit a report which is based on the laboratory component of the course. This will assess your understanding of environmental earth science processes through field and laboratory observations and their interpretation. There will be four laboratory classes in each of weeks 7-10. The assignment will require you to submit a report which contains your observations and interpretation of the data collected and analysed in the laboratory classes. The assignment is 40% of the course mark.

Additional Course Information

Other essential members of the GEOS1211 team:

Tim Churchill is a carnivorous marsupial paleontologist and Clare Fletcher a geoconservationist for Earth and Mars provide teaching support in the lab and the field.

Behind the scenes, professional and technical staff support for the lab and field classes is provided by Dr. Mira van der Ley and Bernadette Phu. Expect to see Mira in the week 7 lab class. Contact Mira if you would like to access Teaching Lab 2

Library outreach is led by Bronwyn Edwards, who you will meet in week 1.

And expect guest appearances from other GEOS teaching and research colleagues including Dr. Micheline (Micha) Campbell and UNSW Analytical Centre staff.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Field Report Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: Week 5: 11 March - 17 March
Practical Assignments Assessment Format: Individual	40%	Start Date: week 7 Due Date: Week 10: 15 April - 21 April
Class Tests Assessment Format: Individual	40%	Start Date: Weekly in the field or lab Due Date: completed before the lab or field class

Assessment Details

Field Report

Assessment Overview

You will be expected to submit a field report which is based on the field trip component of the course.

This will assess your understanding of environmental earth science processes through field observations and their interpretation.

In a typical year, there will be four local field classes in each of weeks 2-5 and running within the allocated class time.

The assignment will require you to submit a field report which contains your observations and interpretation of the four field trips. The indicative length of the report is 8 pages e.g., 2 pages for each field trip.

The assignment is 20% of the course mark, with the marks equally weighted between the four field classes (4 x 5%).

The assignment would be completed mid-term.

Feedback will be provided in the form of a marked rubric and written comments.

Course Learning Outcomes

- CLO2 : Monitor and analyse fundamental features of a variety of Earth materials and landforms to identify and interpret their environmental history.
- CLO3 : Analyse landscapes to interpret how their underlying geology affects human use and environmental processes.
- CLO4 : Undertake field and laboratory projects using a framework of understanding environmental processes and taking an Earth history perspective.
- CLO5 : Communicate field and laboratory observations of environmental and earth science processes.

Detailed Assessment Description

See above

Assessment Length

8 pages

Submission notes

Submission is through TurnItIn

Assessment information

Flexibility in task completion - Short Extension

If you are struggling to meet the deadline for this assessment task, you may apply for a short extension of 7 days.

All short extension applications must be submitted *before* the task's due date.

For details on how to apply, and the conditions on applying, please visit the UNSW Special Consideration website.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Practical Assignments

Assessment Overview

You will be expected to submit a report which is based on the laboratory component of the course.

This will assess your understanding of environmental earth science processes through field and laboratory observations and their interpretation.

In a typical year, there will be four laboratory classes in each of weeks 7-10. The assignment will require you to submit a report which contains your observations and interpretation of the data collected and analysed in the laboratory classes.

The indicative word limit is 2000 words.

The assignment is 40% of the course mark.

The assignment will be started mid-term and completed at the end of the term.

Feedback will be provided in the form of a marked rubric and written comments.

Course Learning Outcomes

- CLO4 : Undertake field and laboratory projects using a framework of understanding environmental processes and taking an Earth history perspective.

- CLO5 : Communicate field and laboratory observations of environmental and earth science processes.

Detailed Assessment Description

See above

Assessment Length

2000 words

Submission notes

Submitted in Moodle using TurnItIn

Assessment information

Flexibility in task completion - Short Extension

If you are struggling to meet the deadline for this assessment task, you may apply for a short extension of 7 days.

All short extension applications must be submitted *before* the task's due date.

For details on how to apply, and the conditions on applying, please visit the UNSW Special Consideration website.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Class Tests

Assessment Overview

Each week, before the laboratory or field class, you will be given some materials to read and video lectures to watch on the topic that is being covered.

Before the class, you will be assessed on your understanding of that topic with a short test that assesses your understanding of the provided materials. You will be required to complete the test before the laboratory or field class.

In a typical year, there will be eight topics, four related to the field classes and four related to the lab classes.

The test will occur each week that there is a laboratory or field class and each is worth 5%. Test 1 covers week 2 topic; test 2 covers the week 3 topic; test 3 covers the week 4 topic; test 4 covers

the week 5 topic; test 5 covers the week 7 topic; test 6 covers the week 8 topic; test 7 covers the week 9 topic and test 8 covers the week 10 topic.

Overall, the assignment is 40% of the course mark, with the marks equally weighted between the weeks (8 x 5%).

Feedback will be provided in the form of written comments.

Course Learning Outcomes

- CLO1 : Use an Earth history perspective to describe the Earth's environment and environmental processes.
- CLO3 : Analyse landscapes to interpret how their underlying geology affects human use and environmental processes.

Detailed Assessment Description

See above

Assessment Length

Short class test (~5 mins)

Submission notes

These are 'pen and paper' tests in class

Assessment information

A repeat test is available at the end of the lab or field class. The best grade counts.

Flexibility in task completion - Missing a Class Test

If you are unwell or otherwise unable to submit a weekly Class Test, please note that your Course Convenor will only take your best 6 quiz marks out of your 8 weekly quizzes to calculate your final course mark.

This effectively allows you to miss *up to 2 class tests* due to misadventure without penalty and without needing to apply for Special Consideration.

If, however, your circumstance impacts *more than 2 class tests*, please formally apply for Special Consideration.

Assignment submission Turnitin type

Not Applicable

General Assessment Information

The assessments will be introduced in week 1 and again in each lab or field class. Grading guides are available on the Moodle course page.

Grading Basis

Standard

Requirements to pass course

A composite mark of 50 out of 100

Course Schedule

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

General Schedule Information

Week One Welcome

On the first Wednesday, we will have a welcome to the course, where you can get to know each other and the staff, complete some paperwork needed for field classes, and have an introduction to the course, and learn about some library resources relevant to the course.

Weeks Two to Ten

Each week, in weeks 2-5 and 7-10, we will cover a different topic. Before each class, you are required to watch a short video about the topic and complete some reading. This will require you to read some academic papers or textbook chapters. Expect to allocate up to 3-hours each week for this pre-class work. You will be tested on your understanding of the topic before the start of the Wednesday lab or field class. Each test counts 5% towards your final grade. You will also be given the option to repeat the test at the end of the class. The highest of the two marks will be counted towards your grade. The Wednesday class will either be a local field trip or a laboratory class.

Field classes (Every week, weeks 2 to 5)

Four local field classes will be held at locations on or close to campus.

Lab classes (Every week, weeks 7 to 10)

These sessions will be in Teaching Lab 2. The subject matter will relate to the reading material that you will have read and been tested on before the class.

What to bring to field-based practical sessions:

The field classes will take place outside and you should come prepared for whatever weather is forecast. Wear appropriate footwear and apply necessary sun protection.

What to bring to the lab classes:

You must wear closed shoes in the laboratory.

Course Resources

Prescribed Resources

Resources for the course are available on Moodle using Leganto

Recommended Resources

All resources are available on the Moodle course page

Additional Costs

There are no additional costs

Course Evaluation and Development

This course was extensively redesigned in 2023 for a return to face-to-face teaching. Student feedback is used to continuously improve the learning experience. In 2024 we have refined the lab and field classes.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Andy Baker		E26 5114	0450 148648	e-mail for availability	No	Yes

Other Useful Information

Academic Information

Upon your enrolment at UNSW, you share responsibility with us for maintaining a safe, harmonious and tolerant University environment.

You are required to:

- Comply with the University's conditions of enrolment.
- Act responsibly, ethically, safely and with integrity.
- Observe standards of equity and respect in dealing with every member of the UNSW community.
- Engage in lawful behaviour.
- Use and care for University resources in a responsible and appropriate manner.
- Maintain the University's reputation and good standing.

For more information, visit the UNSW Student Code of Conduct Website.

Academic Honesty and Plagarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.
Further information about referencing styles can be located at https://student.unsw.edu.au/referencing

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage. At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.
Further information about academic integrity, plagiarism and the use of AI in assessments can be located at:

- The Current Students site,
- The ELISE training site, and
- The Use of AI for assessments site.

The Student Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: https://student.unsw.edu.au/conduct

Submission of Assessment Tasks

Penalty for Late Submissions

UNSW has a standard late submission penalty of:

- 5% per day,
- for all assessments where a penalty applies,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Any variations to the above will be explicitly stated in the Course Outline for a given course or assessment task.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

Special Consideration

If circumstances prevent you from attending/completing an assessment task, you must officially apply for special consideration, usually within 3 days of the sitting date/due date. You can apply by logging onto myUNSW and following the link in the My Student Profile Tab. Medical documentation or other documentation explaining your absence must be submitted with your application. Once your application has been assessed, you will be contacted via your student email address to be advised of the official outcome and any actions that need to be taken from there. For more information about special consideration, please visit: https://student.unsw.edu.au/special-consideration

Important note: UNSW has a "fit to sit/submit" rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

Faculty-specific Information

Additional support for students

- The Current Students Gateway
- Student Support
- Academic Skills and Support
- Student Wellbeing, Health and Safety
- Equitable Learning Services
- UNSW IT Service Centre
- Science EDI Student Initiatives, Offerings and Guidelines