UNSW Course Outline

ZPEM3222 Coastal Geography - 2024

Published on the 11 Feb 2024

General Course Information

Course Code : ZPEM3222
Year : 2024
Term : Semester 1
Teaching Period : Z1
Is a multi-term course? : No
Faculty : UNSW Canberra
Academic Unit : UC Science
Delivery Mode : In Person
Delivery Format : Standard
Delivery Location : UNSW Canberra at ADFA
Campus : UNSW Canberra
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

Australia has a very long coastline and more than 85% of our population is living along the coast. The coastal zone, where the land, sea and atmosphere meet, plays a fundamental role in human settlement, activity and development physically and economically. This course provides an

introduction to coastal geography, which examines the development and evolution of coastal landforms and the processes which create and modify the coast. It deals with three components: coastal oceanography, sediment transport dynamics, and landform features. Special emphasis is given to the interaction and feedbacks between these three components plus human activities. Finally this course considers the response of the coastal zone to contemporary climate and sea-level changes and socio-economic development.

Course Aims

The course deals with several components which are fundamental to coastal geomorphology including geology and sea-level changes, physical processes such as waves, wind and tides, sediment transport and geomorphic evolutionary history of the coastal landforms. These components are tied together in a framework for examining natural systems known as coastal morphodynamics. Consideration is then given to the response of the coastal zone to the contemporary climate and sea-level changes and socio-economic development pressures which lead to coastal management issues.

This course is designed for students who are studying for either B. Arts or B. Science degrees and have an interest in the Australian coastal zone and coastlines of the world.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Describe and discuss the dominant coastal processes which continuously modify coastal landforms
CLO2 : Understand the formation, development and evolution of various coastal landscape with different temporal and spatial scales
CLO3 : Recognise and comprehend the contribution of human-induced changes in the coastal zone with an appreciation of the physical, social and economical barriers to implementing effective coastal management strategies and the consequences of some engineering solutions to coastal problems

Course Learning Outcomes	Assessment Item
CLO1 : Describe and discuss the dominant coastal processes which continuously modify coastal landforms	• Coastal Geography Researcher Bio • Eden field school presentations • Compartment Report • Final Exam
CLO2 : Understand the formation, development and evolution of various coastal landscape with different temporal and spatial scales	• Coastal Geography Researcher Bio • Eden field school presentations • Compartment Report • Final Exam
CLO3 : Recognise and comprehend the contribution of human-induced changes in the coastal zone with an appreciation of the physical, social and economical barriers to implementing effective coastal management strategies and the consequences of some engineering solutions to coastal problems	• Coastal Geography Researcher Bio • Eden field school presentations • Compartment Report • Final Exam

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

The teaching methods, using a combination of lectures, laboratory classes and a field school, are designed to create a learning environment in which:

- Students have the opportunity to learn in a manner in which they feel comfortable, but are strongly encouraged to participate in class discussions
- Students engage with the subject material which they find interesting or relevant in greater detail than can be presented in classes, e.g. through further reading etc and assessments on their own chosen section of coast.

- Students are challenged to broaden their critical thinking and develop their communication skills
- Students work in small groups emulating common field-based research practices
- Students learn to reflect on their previous knowledge and consider how their current learning relates to what they already know

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Coastal Geography Researcher Bio Assessment Format: Individual	10%	Start Date: 26/02/2024 12:00 AM Due Date: 17/03/2024 11:59 PM Post Date: 21/03/2024 03:00 PM
Eden field school presentations Assessment Format: Group	30%	Start Date: 26/02/2024 12:00 AM Due Date: 05/05/2024 05:00 PM Post Date: 13/05/2024 10:00 AM
Compartment Report Assessment Format: Individual	30%	Start Date: 26/02/2024 12:00 AM Due Date: 02/06/2024 11:59 PM Post Date: 07/06/2024 05:00 PM
Final Exam Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: Refer to exam timetable

Assessment Details

Coastal Geography Researcher Bio

Course Learning Outcomes

- CLO1 : Describe and discuss the dominant coastal processes which continuously modify coastal landforms
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Detailed Assessment Description

In this task, each student in the class will be given the name of a coastal geographer (mostly Australians) who has made a significant contribution to research over the past 50 years.

Your task is to make a bibliography of their publications (papers, books etc.) (use Scopus or a referencing software such as Endnote or Mendeley to help with this).

Then use this list to write a ~1000-word summary of this researcher’s contribution to coastal

geography. **Some publications will not concern Australia, this is OK, you can still discuss them**. However, some authors may have **publications that do not concern coastal geography in any way, these DO NOT need to be discussed**. However, these “non-coastal” papers should still appear in your full reference list.

You may like to (again using Scopus), sort your researchers’ publications according to citations to establish their most influential works. Another approach would be to sort the authors works by oldest first to help understand the history of their academic career. Either way you should be looking through the titles and abstracts and downloading many of the papers to help write your summary. Some researchers will also have published books and this will also give you a sense of where their key contributions to coastal science have been.

Your biography should be formatted as follows:

Title: Name of researcher

Heading 1: Contribution to coastal geography

Heading 2: Reference list of all publications

On completion of this task, students are encouraged to exchange reference lists so that everyone has an extensive list of publications from which to draw upon for future assessments.

Use of Generative Artificial Intelligence (AI) – such as ChatGPT – in UNSW Assessments

PLANNING ASSISTANCE

As this assessment task involves some planning or creative processes, you are permitted to use software to generate initial ideas. However, you must develop or edit those ideas to such a significant extent that what is submitted is your own work, i.e. only occasional AI generated words or phrases may form part of your final submission. It is a good idea to keep copies of the initial prompts to show your lecturer if there is any uncertainty about the originality of your work. If the outputs of generative AI such as ChatGPT form a part of your submission, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

Assignment submission Turnitin type

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

Eden field school presentations

Assessment Overview

Group presentations based on research and fieldwork conducted on the Eden Field School.

Course Learning Outcomes

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Detailed Assessment Description

Groups of students will be established for the Eden field school which occurs 3-6th May, end of Week 8. On this trip groups of students will conduct topographic surveys, vegetation surveys and sedimentological surveys (grain size, angularity, sorting, mineralogy etc.) of the four main beaches within Twofold Bay and depending on student numbers, another nearby beach. **All groups will survey all beaches**. However, each group will be assigned one of the beaches for a group presentation on the last evening of the field school. All groups will share their data with all the other groups so that each presentation integrates the findings of all data collected for that beach. For example, if Group 1 is assigned Aslings Beach, then they will present on this beach and will gather all the data collected by the other groups who will also survey Aslings beach.

Each group will prepare a 15-20 minute oral presentation on their assigned beach. Students should use PowerPoint or a similar presentation software to prepare slides for projection during their talk. Each presentation will include an Introduction, Methods, Results and Discussion, Conclusions where the Introduction and Discussion sections integrate the broader literature on coastal geomorphology and research on this region of the coast. There will be an opportunity to work on slides beforehand so that during the trip, groups will focus on preparing their results slides in particular.

Each group will receive a mark, that is the same mark for all students in the group.

Groups will be marked according to the following criteria:

- The accuracy and completeness of datasets collected presented in clear graphs and tables
- Integrating other studies of Twofold Bay and more general literature on beach

morphodynamics, dune vegetation successions and sedimentology of beach dune systems.
- Structure: directing listeners through use of titles, headings and subheadings and working systematically through Introduction, Methods, Results, Discussion, Conclusion
- Appropriate use of figures and tables, limit the amount of text on each slide a try and avoid reading text off slides verbatim
- Slide design and clear delivery of talk.

NB: a full matrix of the assessment criteria is on Moodle.

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Assignment submission Turnitin type

Not Applicable

Compartment Report

Course Learning Outcomes

- CLO1 : Describe and discuss the dominant coastal processes which continuously modify coastal landforms
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Detailed Assessment Description

During the first lecture students will (Week 1), students will be introduced to the ‘Shoreline explorer’ tool on the ‘CoastAdapt’ website https://coastadapt.com.au/. This will allow each student to select a ‘Secondary compartment’ of their choosing. Students are encouraged to

choose a compartment for a section of coast they are somewhat familiar with, or have visited. **By the end of Week 1 students are expected to have chosen their compartment.** Your starting point for information should be this book by Andy Short: "Australian coastal systems : beaches, barriers and sediment compartments"

The compartment report should consider/ contain (not limited to) information relating to the following:

- Introduction and regional setting
- Description of major coastal landforms
- Description of the dominant coastal processes
- Consideration of likely sediment *sources*, *transport pathways* and overall *sediment budget*.
- The likely impact of climate change e.g. sea-level rise (SLR), more intense storms/ cyclones, wave climate shifts, rainfall (i.e. less or more sand supply from inland?) etc.
- *Integration of academic literature throughout **(beyond studies which were specifically located in your chosen compartment)** will demonstrate a higher-level of critical thinking and understanding.*

Students are encouraged to include tables, diagrams, figures, pictures etc. (all referenced to their source) in their report. Tables should include a table caption (above the table) e.g. 'Table 1: List of…' and be referred to in the text. Figures should include a figure caption (below the figure) e.g. 'Figure 1: Map of …' and also be referred to in the text.

The report should include the name and ID of the compartment at the top and should include sub-headings relating to the specific points to be considered e.g. 'Dominant coastal processes'. A list of all references MUST be included at the end of the report. The reference list is to be in alphabetical order of surname and then chronological (oldest to youngest) if the same author. Please use an author-date referencing format of your choosing (there are many variations in formatting e.g. date in brackets or not, journal title in italics or not etc.) just be consistent with the one you choose.

Reports will be assessed according to the following criteria

- Content, (at least) covering the four dot points above etc. as well as the use of academic literature
- Structure- use of headings, subheadings etc.
- Appropriate use of figures and tables – and referring to them in the text
- Scientific writing style, clear, correct grammar, sentence and paragraph structure, use of technical language etc.
- Referencing – appropriate number of references, correct use of author-date style, correctly formatted reference list

NB: a full matrix of the assessment criteria is on Moodle.

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Assignment submission Turnitin type

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

Final Exam

Course Learning Outcomes

- CLO1 : Describe and discuss the dominant coastal processes which continuously modify coastal landforms
- CLO2 : Understand the formation, development and evolution of various coastal landscape with different temporal and spatial scales
- CLO3 : Recognise and comprehend the contribution of human-induced changes in the coastal zone with an appreciation of the physical, social and economical barriers to implementing effective coastal management strategies and the consequences of some engineering solutions to coastal problems

Detailed Assessment Description

The final exam will take place in the Exam Period. The Exam will cover all content delivered in the course including lectures and labs. The final exam will be an online but **invigilated (in exam hall), closed book exam, 3 hours in length** and delivered via Moodle with a Turnitin dropbox to submit answers which are to be typed in a word document.

Use of Generative Artificial Intelligence (AI) – such as ChatGPT

NO ASSISTANCE

It is prohibited to use any software or service to search for or generate information or answers.

If its use is detected, it will be regarded as serious academic misconduct and subject to the standard penalties, which may include 00FL, suspension and exclusion.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

General Assessment Information

Grading Basis

Standard

Requirements to pass course

The assessment for the course has been designed so that an overall mark of 50% or greater indicates that the student has unambiguously demonstrated satisfactory completion of each learning outcome. For this reason, and consistent with the UNSW policy of abolishing the pass conceded grade, students who receive less than 50% overall for the course will receive a fail grade.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 26 February - 1 March	Lecture	Course outline, structure and introducation
	Lecture	Introdcution to coasts
	Homework	Research and choose your coastal compartment
Week 2 : 4 March - 8 March	Lecture	Geological setting of coasts
	Lecture	Sea-level change
	Laboratory	Coastal topography exercise
Week 3 : 11 March - 15 March	Lecture	Waves
	Laboratory	Coastal geology and sea-level rise
Week 4 : 18 March - 22 March	Lecture	Tides
	Lecture	Coastal compartments 1
	Laboratory	Waves and tides exercise
Week 5 : 25 March - 29 March	Lecture	Compartments 2 and beaches
	Lecture	Beaches
	Laboratory	Beach changes and response to storms
Week 6 : 1 April - 5 April	Lecture	Coastal barriers
	Laboratory	Coastal barriers
Week 7 : 22 April - 26 April	Lecture	Coastal dunes
Week 8 : 29 April - 3 May	Lecture	Estuaries
	Lecture	Wetlands
	Fieldwork	Eden field school prep - survey practice, presentation preparation
Week 9 : 6 May - 10 May	Online Activity	Muddy coasts (recording on Moodle)
	Lecture	Deltas
	Laboratory	Deltas, wetlands
Week 10 : 13 May - 17 May	Lecture	Coral reefs
	Lecture	Reef Islands
	Laboratory	Lord Howe Island case study
Week 11 : 20 May - 24 May	Lecture	Rocky coasts
	Lecture	Shore platforms
	Laboratory	Figure 8 pool exercise
Week 12 : 27 May - 31 May	Lecture	Human impacts on the coast
	Lecture	Extreme events
	Laboratory	Breakwalls and dredging exercise
Week 13 : 3 June - 7 June	Lecture	Coastal management 1
	Lecture	Coastal management 2
	Laboratory	Exam prep and revision

Attendance Requirements

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

Course Resources

Recommended Resources

A Moodle site has been created to support the teaching programme of this course. This site

includes the timetable for lectures and laboratory classes, the PowerPoint presentation slides used in the lectures, information to support practical classes and tutorials, useful references and web site addresses for teaching, learning and research.

Recommended texts and reference works:

Masselink, G., Hughes, M., & Knight, J. (2014). *Introduction to Coastal Processes and Geomorphology*, *Second Edition.* (2nd ed.). London: Taylor and Francis.

Bird, E., & Ebooks Corporation. (2008). *Coastal geomorphology : An introduction* (2nd ed.). Chichester: John Wiley & Sons.

Carter, B., Woodroffe, C., & IGCP Project 274. (1994). *Coastal Evolution : Late Quaternary Shoreline Morphodynamics*

Woodroffe, C. D. (2003) *Coasts: form, process, and evolution*. Cambridge University Press, Cambridge

Chapman, D., Geary, M., Roy, P.S., Thom, B.G. (1982). *Coastal Evolution and Coastal Erosion in New South Wales.* A report prepared for the Coastal Council of New South Wales, Liverpool Street, Sydney

Course Evaluation and Development

One of the key priorities for UNSW is a drive for academic excellence in education. One of the ways of determining how well UNSW is progressing towards this goal is by listening to our own students. Students will be asked to complete the myExperience survey towards the end of this course.

Students can also provide feedback during the semester via: direct contact with the lecturer, the “On-going Student Feedback” link in Moodle, Student-Staff Liaison Committee meetings in schools, informal feedback conducted by staff, and focus groups. Student opinions really do make a difference. Refer to the Moodle site for this course to see how the feedback from previous students has contributed to the course development.

Important note: Students are reminded that any feedback provided should be constructive and professional and that they are bound by the Student Code of Conduct Policy

https://www.gs.unsw.edu.au/policy/documents/studentcodepolicy.pdf

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Thomas Oliver		UNSW Canberra, Building 22, Room 309	02 5114 5038	By appointment within normal business hours	No	Yes

Other Useful Information

Academic Information

Course Evaluation and Development

One of the key priorities in the 2025 Strategy for UNSW is a drive for academic excellence in education. One of the ways of determining how well UNSW is progressing towards this goal is by listening to our own students. Students will be asked to complete the myExperience survey towards the end of each course.

Students can also provide feedback during the semester via: direct contact with the lecturer, the "On-going Student Feedback" link in Moodle, Student-Staff Liaison Committee meetings in schools, informal feedback conducted by staff, and focus groups (where applicable). Student opinions really do make a difference. Refer to the Moodle site for your course to see how the feedback from previous students has contributed to the course development.

Important note: Students are reminded that any feedback provided should be constructive and professional and that they are bound by the Student Code of Conduct.

https://www.gs.unsw.edu.au/policy/documents/studentcodepolicy.pdf

Equitable Learning Services (ELS)

Students living with neurodivergent, physical and/or mental health conditions or caring for someone with these conditions may be eligible for support through the Equitible Learning Services team. Equitable Learning Services is a free and confidential service that provides practical support to ensure your mental or physical health conditions do not adversely affect your studies.

Our team of dedicated **Equitable Learning Facilitators** (ELFs) are here to assist you through this

process. We offer a number of services to make your education at UNSW easier and more equitable.

Further information about ELS for currently enrolled students can be found at: https://www.student.unsw.edu.au/equitable-learning

Academic Honesty and Plagarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to this principle of academic integrity. All students are expected to adhere to UNSW's Student Code of Conduct. Find relevant information at: Student Code of Conduct (unsw.edu.au)

Plagiarism undermines academic integrity and is not tolerated at UNSW. It is defined as using the words or ideas of others and passing them off as your own, and can take many forms, from deliberate cheating to accidental copying from a source without acknowledgement.

For more information, please refer to the following:

https://student.unsw.edu.au/plagiarism

Submission of Assessment Tasks

Special Consideration

Special Consideration is the process for assessing and addressing the impact on students of short-term events, that are beyond the control of the student, and that affect performance in a specific assessment task or tasks.

Applications for Special Consideration will be accepted in the following circumstances only:

- Where academic work has been hampered to a substantial degree by illness or other cause;
- The circumstances are unexpected and beyond the student's control;
- The circumstances could not have reasonably been anticipated, avoided or guarded against by the student; and either:

(i) they occurred during a critical study period and was 3 consecutive days or more duration, or a total of 5 days within the critical study period; or

(ii) they prevented the ability to complete, attend or submit an assessment task for a

specific date (e.g. final exam, in class test/quiz, in class presentation)

Applications for Special Consideration must be made as soon as practicable after the problem occurs and at the latest within three working days of the assessment or the period covered by the supporting documentation.

By sitting or submitting the assessment task the student is declaring that they are fit to do so and cannot later apply for Special Consideration (UNSW 'fit to sit or submit' requirement).

Sitting, accessing or submitting an assessment task on the scheduled assessment date, after applying for special consideration, renders the special consideration application void.

Find more information about special consideration at: https://www.student.unsw.edu.au/special/consideration/guide

Or apply for special consideration through your MyUNSW portal.

Late Submission of assessment tasks (other than examinations)

UNSW has a standard late submission penalty of:

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

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

Electronic submission of assessment

Except where the nature of an assessment task precludes its electronic submission, all assessments must be submitted to an electronic repository, approved by UNSW or the Faculty, for archiving and subsequent marking and analysis.

Release of final mark

All marks obtained for assessment items during the session are provisional. The final mark as published by the university following the assessment review group meeting is the only official mark.