UNSW Course Outline

IEST7001 Engaging Science for Environmental Leadership - 2024

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General Course Information

Course Code : IEST7001
Year : 2024
Term : Term 3
Teaching Period : T3
Is a multi-term course? : No
Faculty : Faculty of Arts, Design and Architecture
Academic Unit : School of Humanities and Languages
Delivery Mode : In Person
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Postgraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

Effective environmental leadership and care is dependent on accurate and responsive information about our environments – but how do we know the world? This course introduces, examines, and demystifies a diverse range of scientific modes of environmental engagement

and knowledge. The course aims to make the familiar aspects of science strange and the strange aspects familiar, encouraging embodied experience of scientific methods as well as situating such practices within their political and cultural contexts through analysis and through meeting with experts. You will learn to become comfortable with the use of a range of scientific modes of exploring environmental questions and to challenge yourself to think about the limits, insights, and contingencies of scientific practice. This course is suitable for both scientifically and non-scientifically trained students.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Examine and apply a diverse range of scientific methods used in environmental care, leadership, and change-making
CLO2 : Use a range of theories of knowledge to analyse scientific practices and embed them within their sociocultural contexts
CLO3 : Define a range of parameters used in environmental sciences, including their related properties, their units, dimensions, and techniques of measurement
CLO4 : Describe the essential elements of scientific methods, experimental design, statistical analysis and uncertainties, and appreciate their importance in environmental care and leadership
CLO5 : Communicate effectively with environmental scientists and modellers, as well as non-scientific audiences
CLO6 : Recognise and contextualise sound scientific practice and use this as a basis to make well-grounded and responsive decisions about environment and society questions

Course Learning Outcomes	Assessment Item
CLO1 : Examine and apply a diverse range of scientific methods used in environmental care, leadership, and change-making	• Weekly Responses • Final Report • Group presentation
CLO2 : Use a range of theories of knowledge to analyse scientific practices and embed them within their sociocultural contexts	• Weekly Responses • Final Report • Group presentation
CLO3 : Define a range of parameters used in environmental sciences, including their related properties, their units, dimensions, and techniques of measurement	• Weekly Responses • Final Report • Group presentation
CLO4 : Describe the essential elements of scientific methods, experimental design, statistical analysis and uncertainties, and appreciate their importance in environmental care and leadership	• Weekly Responses • Final Report • Group presentation
CLO5 : Communicate effectively with environmental scientists and modellers, as well as non-scientific audiences	• Final Report • Group presentation
CLO6 : Recognise and contextualise sound scientific practice and use this as a basis to make well-grounded and responsive decisions about environment and society questions	• Final Report • Group presentation

Learning and Teaching Technologies

Moodle - Learning Management System | Echo 360 | Blackboard Collaborate

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Weekly Responses Assessment Format: Individual	30%	Start Date: Weekly via Moodle Due Date: Week 2: 16 September - 22 September, Week 3: 23 September - 29 September, Week 4: 30 September - 06 October, Week 5: 07 October - 13 October, Week 6: 14 October - 20 October, Week 7: 21 October - 27 October, Week 8: 28 October - 03 November, Week 9: 04 November - 10 November
Final Report Assessment Format: Individual	40%	Start Date: Not Applicable Due Date: 20/11/2024 11:55 PM
Group presentation Assessment Format: Group	30%	Due Date: Week 5: 07 October - 13 October, Week 6: 14 October - 20 October, Week 7: 21 October - 27 October, Week 8: 28 October - 03 November

Assessment Details

Weekly Responses

Assessment Overview

In each week's responses, students will be required to respond to the readings for the week (approximately 1500 words total).

Feedback via individual written comment.

Course Learning Outcomes

- CLO1 : Examine and apply a diverse range of scientific methods used in environmental care, leadership, and change-making
- CLO2 : Use a range of theories of knowledge to analyse scientific practices and embed them within their sociocultural contexts
- CLO3 : Define a range of parameters used in environmental sciences, including their related properties, their units, dimensions, and techniques of measurement
- CLO4 : Describe the essential elements of scientific methods, experimental design, statistical analysis and uncertainties, and appreciate their importance in environmental care and leadership

Detailed Assessment Description

Each week students share a forum post, as well as respond to another students' post, at minimum. 10% of this grade is weekly participation in posting and responding. Another 10%,

submitted ahead of the final report, is selecting 3 of your forum posts that best reflect your contribution to collaborative learning in the course. The final 10% will be awarded for engaging with the skills-oriented science learning modules. Reflecting on your most impactful contributions to discussion and your learning in the science modules will give you fuel for your final report.

Assessment Length

1500 words cumulative + active engagement with supplementary learning materials

Assignment submission Turnitin type

Not Applicable

Generative AI Permission Level

Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other media, whether based on your own work or not.
If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.
For more information on Generative AI and permitted use please see here.

No plagiarism or use of generative AI: You are expected to create all your own work and to cite properly. Plagiarism is not tolerated nor is generative AI assistance, such as ChatGPT or Grammarly. If you plagiarise or use generative AI, this is regarded as serious academic misconduct and you will be reported to UNSW integrity officials and subject to standard plagiarism penalties, which may include failing the course, suspension, and/or exclusion from the program. In light of the rise of AI tools and contract cheating, in order to protect the integrity of assessment processes in this course, we will periodically use spot oral exams to verify that individual assessments are the work of the student who is submitting it as their own.

Final Report

Assessment Overview

For the final report (1,500 words), students will use reflective practice to observe and analyse

their experiences and preferences regarding scientific methods described in their Group Presentation. Students will reflect on their own learning backgrounds to articulate what methods of enquiry they were trained in professionally or as undergraduates. They will reflect on their own social and cultural context and how this shapes science communication for the issue described in their Group Presentation.

Feedback via individual written comment.

Course Learning Outcomes

- CLO1 : Examine and apply a diverse range of scientific methods used in environmental care, leadership, and change-making
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- CLO3 : Define a range of parameters used in environmental sciences, including their related properties, their units, dimensions, and techniques of measurement
- CLO4 : Describe the essential elements of scientific methods, experimental design, statistical analysis and uncertainties, and appreciate their importance in environmental care and leadership
- CLO5 : Communicate effectively with environmental scientists and modellers, as well as non-scientific audiences
- CLO6 : Recognise and contextualise sound scientific practice and use this as a basis to make well-grounded and responsive decisions about environment and society questions

Assessment Length

1500 words

Assignment submission Turnitin type

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

Generative AI Permission Level

Simple Editing Assistance

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Group presentation

Assessment Overview

Students as a group will choose an environmental issue and articulate at least two uses of scientific observation and analysis used in planning for action to address this issue in a 5 minutes presentation followed by Q and A.

Feedback via general comments and model answers.

Course Learning Outcomes

- CLO1 : Examine and apply a diverse range of scientific methods used in environmental care, leadership, and change-making
- CLO2 : Use a range of theories of knowledge to analyse scientific practices and embed them within their sociocultural contexts
- CLO3 : Define a range of parameters used in environmental sciences, including their related properties, their units, dimensions, and techniques of measurement
- CLO4 : Describe the essential elements of scientific methods, experimental design, statistical analysis and uncertainties, and appreciate their importance in environmental care and leadership
- CLO5 : Communicate effectively with environmental scientists and modellers, as well as non-scientific audiences
- CLO6 : Recognise and contextualise sound scientific practice and use this as a basis to make well-grounded and responsive decisions about environment and society questions

Detailed Assessment Description

Students as a small group will choose an environmental issue and related multi-stakeholder project to research and present on. In groups, students will articulate at least two uses of scientific observation and analysis used in planning for action / intervention to address this issue and develp a presentation to effectively communicate the science and project outcomes. Collaborative enagement with supplementary learning materials to support the

development of the research and presentation is required. It is expected that small groups will work together outside of the in-person seminars, at times agreed by team members. See syllabus for details.

Assessment Length

5-8 minute presentation with Q&A

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

Simple Editing Assistance

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General Assessment Information

Academic Integrity

The University of New South Wales policy on academic integrity is here: https://student.unsw.edu.au/plagiarism.

PLEASE NOTE: The basis of the plagiarism policy is that you MUST NOT take credit for others' work, and you MUST give credit where you rely on another's work. This means that it is completely permissible (and often encouraged) to quote another source, however you MUST indicate that you are doing so by using quotation marks, and by providing a citation to that work. Failure to do so will result in our turning your work over to the Faculty Plagiarism Officer.

IMPORTANT: No plagiarism or generative AI: You are expected to create all your own work and to cite properly. Plagiarism is not tolerated nor is generative AI assistance, such as ChatGPT. If you plagiarise or use generative AI, this is regarded as serious academic misconduct and you will be reported to UNSW integrity officials and subject to standard plagiarism penalties, which may include failing the course, suspension, and/or exclusion from the program. In light of the rise of AI tools and contract cheating, in order to protect the integrity of assessment processes in this course, we will periodically use spot oral exams to verify that individual assessments are the work of the student who is submitting it as their own.

ALSO NOTE: Your work will be submitted via Turnitin. This is a software suite that checks your work for similarity against existing textual sources as well as ALL OTHER student submissions to Turnitin globally. This means you WILL BE CAUGHT if you violate the University policy on Academic Integrity.

Further guidance provided in class and via Moodle.

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 9 September - 15 September	Seminar	Introduction to Engaging Science Three hour blended lecture and workshop in seminar style.
Week 2 : 16 September - 22 September	Seminar	Part 1. Learning Science and Science Cultures: Exploring Ways of Knowing, Systems Thinking and Transdisciplinarity Three hour blended lecture and workshop in seminar style.
Week 3 : 23 September - 29 September	Intensive	Part 2. Learning Science and Science Cultures: Classifying, Collecting and Collaborating Week 3 will be run as an intensive with an on-campus field visit scheduled in the afternoon (distance students to engage via Moodle), as well as an evening seminar. See Moodle and course syllabus for details.
Week 4 : 30 September - 6 October	Online Activity	Communicating Science: Creativity, Storytelling and the Media Asynchronous engagement - No weekly seminar
Week 5 : 7 October - 13 October	Seminar	Ecology, Biodiversity, Extinction: Conservation, Biology and Citizen Science Three hour blended lecture and workshop in seminar style.
Week 6 : 14 October - 20 October	Seminar	Atmospheres of Science: Complexity and the Politics of Climate Change Three hour blended lecture and workshop in seminar style.
Week 7 : 21 October - 27 October	Seminar	Pushing the Boundaries: Regenerative Systems and Practices in Science Three hour blended lecture and workshop in seminar style.
Week 8 : 28 October - 3 November	Seminar	Part 1. Leadership Models, Frameworks and Mentors in Environmental Management: Positionality Matters Three hour blended lecture and workshop in seminar style.
Week 9 : 4 November - 10 November	Seminar	Part 2. Leadership Models, Frameworks and Mentors in Environmental Management: Distributed Leadership and Co-Design Three hour blended lecture and workshop in seminar style.
Week 10 : 11 November - 17 November	Seminar	Love, Science and Sustaining Worlds: Contemporary Research Paradigms in the Pluriverse Three hour blended lecture and workshop in seminar style.

Attendance Requirements

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

Course Resources

Prescribed Resources

These will be provided via your Moodle site, using the LEGANTO system, and via your own research.

Recommended Resources

You are expected to make good use of the readings and all other materials provided for the course, and to read beyond those materials for your assignments. Independent research is expected.

Course Evaluation and Development

Feedback will be gathered via MyExperience. Previous commentary suggests the need for further integration of on-line and in-class activity, which we have undertaken. Developments across the MEM program give focus to the experience of distance students and the better use of on-line forums and independent research by students.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Tania Leimbach		324 Morven Brown, Kensington Campus	Email contact preferred	By appointment	No	Yes

Other Useful Information

Academic Information

Due to evolving advice by NSW Health, students must check for updated information regarding online learning for all Arts, Design and Architecture courses this term (via Moodle or course information provided).

Please see: https://www.unsw.edu.au/arts-design-architecture/student-life/resources-support/protocols-guidelines for essential student information relating to:

- UNSW and Faculty policies and procedures;
- Student Support Services;
- Dean's List;
- review of results;
- credit transfer;
- cross-institutional study and exchange;
- examination information;
- enrolment information;
- Special Consideration in the event of illness or misadventure;
- student equity and disability;

And other essential academic information.

Academic Honesty and Plagarism

Plagiarism is using the words or ideas of others and presenting them as your own. It can take

many forms, from deliberate cheating to accidentally copying from a source without acknowledgement.

UNSW groups plagiarism into the following categories:

- Copying: Using the same or very similar words to the original text or idea without acknowledging the source or using quotation marks. This includes copying materials, ideas or concepts from a book, article, report or other written document, presentation, composition, artwork, design, drawing, circuitry, computer program or software, website, internet, other electronic resource, or another person's assignment without appropriate acknowledgement.
- Inappropriate paraphrasing: Changing a few words and phrases while mostly retaining the original information, structure and/or progression of ideas of the original without acknowledgement. This also applies in presentations where someone paraphrases another's ideas or words without credit and to piecing together quotes and paraphrases into a new whole, without appropriate referencing.
- Collusion: Working with others but passing off the work as a person's individual work. Collusion also includes providing your work to another student for the purpose of them plagiarising, paying another person to perform an academic task, stealing or acquiring another person's academic work and copying it, offering to complete another person's work or seeking payment for completing academic work.
- Inappropriate citation: Citing sources which have not been read, without acknowledging the "secondary" source from which knowledge of them has been obtained.
- Duplication ("self-plagiarism"): Submitting your own work, in whole or in part, where it has previously been prepared or submitted for another assessment or course at UNSW or another university.

The UNSW Academic Skills support offers resources and individual consultations. Students are also reminded that careful time management is an important part of study. One of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and proper referencing of sources in preparing all assessment items. UNSW Library has the ELISE tool available to assist you with your study at UNSW. ELISE is designed to introduce new students to studying at UNSW, but it can also be a great refresher during your study.

Completing the ELISE tutorial and quiz will enable you to:

- analyse topics, plan responses and organise research for academic writing and other assessment tasks
- effectively and efficiently find appropriate information sources and evaluate relevance to your needs
- use and manage information effectively to accomplish a specific purpose
- better manage your time
- understand your rights and responsibilities as a student at UNSW

- be aware of plagiarism, copyright, UNSW Student Code of Conduct and Acceptable Use of UNSW ICT Resources Policy
- be aware of the standards of behaviour expected of everyone in the UNSW community
- locate services and information about UNSW and UNSW Library

Use of AI for assessments

As AI applications continue to develop, and technology rapidly progresses around us, we remain committed to our values around academic integrity at UNSW. Where the use of AI tools, such as ChatGPT, has been permitted by your course convener, they must be properly credited and your submissions must be substantially your own work.

In cases where the use of AI has been prohibited, please respect this and be aware that where unauthorised use is detected, penalties will apply.

Use of AI for assessments | UNSW Current Students

Submission of Assessment Tasks

Turnitin Submission

If you encounter a problem when attempting to submit your assignment through Turnitin, please telephone External Support on 9385 3331 or email them on externalteltsupport@unsw.edu.au

Support hours are 8:00am – 10:00pm on weekdays and 9:00am – 5:00pm on weekends (365 days a year). If you are unable to submit your assignment due to a fault with Turnitin, you may apply for an extension, but you must retain your ticket number from External Support (along with any other relevant documents) to include as evidence to support your extension application. If you email External Support, you will automatically receive a ticket number, but if you telephone, you will need to specifically ask for one. Turnitin also provides updates on their system status on Twitter.

Generally, assessment tasks must be submitted electronically via either Turnitin or a Moodle assignment. In instances where this is not possible, alternative submission details will be stated on your course's Moodle site. For information on how to submit assignments online via Moodle: https://student.unsw.edu.au/how-submit-assignment-moodle

Late Submission Penalty

UNSW has a standard late submission penalty of:

- 5% per calendar day,
- for all assessments where a penalty applies,
- capped at five calendar 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 Special Consideration as early as possible before the deadline. Support with Time Management is available here.

School Contact Information

School of Humanities & Languages

Email: hal@unsw.edu.au

Location: School Office, Morven Brown Building, Level 2, Room 258

Opening Hours: Monday - Friday, 9am - 5pm