CVEN9888

Environmental Management

Term 2, 2023

Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Matthew Lee	mattlee@unsw.edu.au	Contact through Moodle Forum		

School Contact Information

Engineering Student Support Services – The Nucleus - enrolment, progression checks, clash requests, course issues or program-related queries

Engineering Industrial Training – Industrial training questions

UNSW Study Abroad – study abroad student enquiries (for inbound students)

UNSW Exchange – student exchange enquiries (for inbound students)

UNSW Future Students – potential student enquiries e.g. admissions, fees, programs, credit transfer

Phone

(+61 2) 9385 8500 – Nucleus Student Hub

(+61 2) 9385 7661 – Engineering Industrial Training

(+61 2) 9385 3179 – UNSW Study Abroad and UNSW Exchange (for inbound students).

Course Details

Units of Credit 6

Summary of the Course

Spectrum of modern environmentalism and sustainable development; environmental impact statement techniques and EIA procedures; environmental management systems; tools for the analysis and management of environmental impacts of engineering projects, including environmental risk assessment, environmental waste audits, Life Cycle Assessment and other materials accounting techniques.

Course Aims

The objectives of this subject are to :
Provide an introduction to ecologically sustainable development principles and investigate in some detail how ESD might be operationalised through appropriate Environmental Impact Assessment of new project proposals, and Environmental Management Systems for corporations and regions. Provide an introduction to the use of some developing tools to assist in implementing EISs and EMSs, including environmental reviews and audits, Life Cycle Assessment, and Materials Flux Analysis.
Students will be provided with concepts and reference materials in the modules and will be expected to apply these to actual projects taken from the real world

Course Learning Outcomes

After successfully completing this course, you should be able to:

Learning Outcome	EA Stage 1 Competencies
1. Understand ecologically sustainable development principles and investigate in some detail how ESD might be operationalised through appropriate Environmental Impact Assessment of new project proposals, and Environmental Management Systems for corporations and regions.	PE1.1, PE1.6, PE2.2, PE3.4, PE3.6
2. Use developing tools to assist in implementing EISs and EMSs, including environmental reviews and audits, Life Cycle Assessment, and Materials Flux Analysis.	PE1.1, PE1.6, PE2.2, PE3.4
3. Use concepts and reference materials in the modules and to apply these to actual projects taken from the real world	PE1.1, PE1.6, PE2.2, PE3.4

Teaching Strategies

Please refer to the information in Moodle

Assessment

Students will undertake a variety of individual and group assessment components that are associated with course objectives.

Students who perform poorly in the quick quizzes and workshops are recommended to discuss progress with the lecturer during the term.

Note: The course coordinator and lecturer reserve the right to adjust the final scores by scaling if agreed by the Head of School.

Assessment task	Weight	Due Date	Course Learning Outcomes Assessed
1. Assignment	30%	17/07/2023 09:00 AM	1, 2, 3
2. Quizzes	30%	See Moodle for timing	1, 2, 3
3. Final Exam	40%	Date to be announced	1, 2, 3

Assessment 1: Assignment

Assessment length: 10 pages
Submission notes: One copy of the report will be submitted per group, Label your file as Group_x.doc (or .pdf)
Due date: 17/07/2023 09:00 AM

Assignment 1 is a GROUP assignment identifying key material flows in a region and summarised in a group report. The aim is to demonstrate an understanding of environmental sustainability and material accounting methodology, the capacity for analytical and critical thinking and for creative problem solving and skills for collaborative and multi-disciplinary work. The assessment criterion refers to the ability to apply goods and material flows in various contexts, critical analysis of relevant concepts/ theories/ literatures and of own ideas, assumptions and explanations, results, conclusions, summary and the overall report quality. The contributions of individual students are assessed separately in this group assignment; students will receive individual marks.

Students must actively project-manage their assignment work to gain a good mark in the major assignments. Students should expect to spend a significant amount of time working with their team (where applicable) to develop their work. Note that the Turnitin will be able to detect similarities between assignments.

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

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

Assessment 2: Quizzes

Assessment length: Each quiz will be 20 minutes
Submission notes: Quizzes will be conducted in Moodle Quiz, students will have a 4hr window in which to complete it. Timing is shown on Moodle.
Due date: See Moodle for timing

4 Quizzes worth 30% of the course total each. The quizzes directly relate to the content previously taught in lectures and workshops.

This is not a Turnitin assignment

Assessment 3: Final Exam

Due date: Date to be announced

The exam is a 2-hour open book exam during the normal exam period. The exam will test the students' ability to synthesise the overall course. All material presented during the session will be examinable in the exam unless otherwise noted.

Attendance Requirements

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

Course Schedule

View class timetable

Timetable

Date	Type	Content
Week 1: 29 May - 2 June	Lecture	Introduction, State of the Environment, Overview of Environmental protection
	Workshop	Workshop activities associated with the lecture content
Week 2: 5 June - 9 June	Lecture	Sustainable development and Circular Economy (CE)
	Workshop	Workshop activities associated with the lecture content
Week 3: 12 June - 16 June	Lecture	Public Holiday
	Workshop	Public Holiday
	Assessment	Quiz 1 - See Moodle for details
Week 4: 19 June - 23 June	Lecture	Managing resource flows (MFA and EW-MFA)
	Workshop	Workshop activities associated with the lecture content
Week 5: 26 June - 30 June	Lecture	Carbon, Material and Environmental Footprints
	Workshop	Workshop activities associated with the lecture content
	Assessment	Quiz 2- See Moodle for details
Week 7: 10 July - 14 July	Lecture	Evaluating multiple impacts using LCA
	Workshop	Workshop activities associated with the lecture content
Week 8: 17 July - 21 July	Lecture	Approaches for evaluating products and supply
	Workshop	Workshop activities associated with the lecture content
	Assessment	Group Assignment Due - Monday 17th July 9 am
	Assessment	Assignment: One copy of the report will be

		submitted per group, Label your file as Group_x.doc (or .pdf)
Week 9: 24 July - 28 July	Lecture	Managing projects with EIA
	Workshop	Workshop activities associated with the lecture content
	Assessment	Quiz 3- See Moodle for details
Week 10: 31 July - 4 August	Lecture	Environmental management in companies (EMS), Sustainability reporting, Exam overview
	Workshop	Workshop activities associated with the lecture content
	Assessment	Quiz 4 - See Moodle for details

Resources

Prescribed Resources

A variety of resources have been compiled on Moodle and the OpenLearning site.

Submission of Assessment Tasks

Please refer to the Moodle page of the course for further guidance on assessment submission.

UNSW has a standard late submission penalty of:

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

Academic Honesty and Plagiarism

Beware! An assignment that includes plagiarised material will receive a 0 fail, and students who plagiarise may fail the course. Students who plagiarise are also liable to disciplinary action, including exclusion from enrolment.

Plagiarism is the use of another person's work or ideas as if they were your own. When it is necessary or desirable to use other people's material you should adequately acknowledge whose words or ideas they are and where you found them (giving the complete reference details, including page number(s)). The Learning Centre provides further information on what constitutes Plagiarism at:

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

Academic Information

Final Examinations:

Final Exams in T2 2023 will be held on campus between Friday 11th and Thursday 24th August (inclusive), and Supplementary Exams between Monday 4th and Friday 8th September (inclusive). You are required to be available on these dates. Please do not to make any personal or travel arrangements during this period.

For students enrolled in the distance offering of a postgraduate course, and who reside further than 100km from UNSW Kensington campus, will be contacted regarding sitting an external exam. The school's External Exam Policy can be found on the Intranet.

ACADEMIC ADVICE

- Key Staff to Contact for Academic Advice (log in with your zID and password): https://intranet.civeng.unsw.edu.au/key-staff-to-contact-during-your-studies-at-unsw
- Key UNSW Dates - eg. Census Date, exam dates, last day to drop a course without academic/financial liability etc.
- CVEN Student Intranet (log in with your zID and password): https://intranet.civeng.unsw.edu.au/student-intranet
- Student Life at CVEN, including Student Societies: https://www.unsw.edu.au/engineering/civil-and-environmental-engineering/student-life
- Special Consideration: https://student.unsw.edu.au/special-consideration
- General and Program-Specific Questions: The Nucleus: Student Hub
- Book an Academic Advising session: https://unswengacademicadvising.as.me/schedule.php

Disclaimer

This course outline sets out description of classes at the date the Course Outline is published. The nature of classes may change during the Term after the Course Outline is published. Moodle should be consulted for the up to date class descriptions. If there is any inconsistency in the description of activities between the University timetable and the Course Outline (as updated in Moodle), the description in the Course Outline/Moodle applies.

Image Credit

Mike Gal.

CRICOS

CRICOS Provider Code: 00098G

Acknowledgement of Country

We acknowledge the Bedegal people who are the traditional custodians of the lands on which UNSW Kensington campus is located.

Appendix: Engineers Australia (EA) Professional Engineer Competency Standard

Program Intended Learning Outcomes	
Knowledge and skill base	
PE1.1 Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline	✓
PE1.2 Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline	
PE1.3 In-depth understanding of specialist bodies of knowledge within the engineering discipline	
PE1.4 Discernment of knowledge development and research directions within the engineering discipline	
PE1.5 Knowledge of engineering design practice and contextual factors impacting the engineering discipline	
PE1.6 Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline	✓
Engineering application ability	
PE2.1 Application of established engineering methods to complex engineering problem solving	
PE2.2 Fluent application of engineering techniques, tools and resources	✓
PE2.3 Application of systematic engineering synthesis and design processes	
PE2.4 Application of systematic approaches to the conduct and management of engineering projects	
Professional and personal attributes	
PE3.1 Ethical conduct and professional accountability	
PE3.2 Effective oral and written communication in professional and lay domains	
PE3.3 Creative, innovative and pro-active demeanour	
PE3.4 Professional use and management of information	✓
PE3.5 Orderly management of self, and professional conduct	
PE3.6 Effective team membership and team leadership	✓