

SEE4206: SOCIAL PERSPECTIVES OF ENVIRONMENTAL SCIENCE AND ENGINEERING

Effective Term

Semester A 2024/25

Part I Course Overview

Course Title

Social Perspectives of Environmental Science and Engineering

Subject Code

SEE - School of Energy and Environment

Course Number

4206

Academic Unit

School of Energy and Environment (E2)

College/School

School of Energy and Environment (E2)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

SEE2204 Principles of Sustainability

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

The course aims to provide science and engineering students an introduction to qualitative social science skills that allow issues such as quality of live, social sustainability of environmental projects to be evaluated. How can we evaluate the lived experience of individuals and communities and citizens in response to projects that seek to address environmental problems they face in modern day cities? The course takes a participatory approach to understanding and assessing social sustainability, built on shared knowledge and values. The course enables the students to develop an understanding of social sustainability and the assessment of sustainability projects: critical awareness, varied conceptualisations and a multitude of perspectives. Topics covered include, Quality of life and well-being; Stakeholder and community engagement; Researching the social world: theories and methods; Sustainable lifestyles and sustainable behaviours; Social values of the urban environment, Qualitative Research Methodology.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if DEC-A1 DEC-A2 DEC-A3 app.)			
1	Explain clearly the different perspectives, methods, tools and techniques in the study of human environment.		x		x
2	Develop a knowledge and understanding of the social dimensions of the environmental science and engineering (definitions, principles, underlying concepts and different perspectives).		x	x	
3	Critically examine and evaluate environmental projects in terms of sustainability and social impacts.		x	x	
4	Analyze the factors and drivers for change in the human environment, by the use of case studies.			x	x

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

LTAs		Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture	Students will engage in lectures with facilitated discussion to explain key theories and concepts of Social Perspectives of Environmental Science and Engineering.	1, 2, 3, 4	2

2	Tutorial	Students will learn through case studies the application of theory to real world examples of environmental improvement schemes from a social perspective.	1, 2, 3, 4	1
3	Analysis	Students will engage in activities to adopt and analyse qualitative methodologies to investigate environmental improvement schemes.	1, 2, 3, 4	3

Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1 Assignments Assignments will be given in case scenarios for the student to apply theory learned in the lecture to real world examples of environmental improvement schemes.	1, 2, 3, 4	60	

Continuous Assessment (%)

60

Examination (%)

40

Examination Duration (Hours)

2

Additional Information for ATs

Examination duration: 2 hrs

Percentage of continuous assessment, examination, etc.: 60% by continuous assessment; 40% by exam

To pass a course, a student must do ALL of the following:

- 1) obtain at least 30% of the total marks allocated towards continuous assessment (combination of assignments, pop quizzes, term paper, lab reports and/or quiz, if applicable);
- 2) obtain at least 30% of the total marks allocated towards final examination (if applicable); and
- 3) meet the criteria listed in the section on Assessment Rubrics.

Assessment Rubrics (AR)**Assessment Task**

1. Assignments

Criterion

Capacity to understand the social dimensions of sustainability

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal level

Assessment Task

2. Examination

Criterion

Capacity to understand the social dimensions of sustainability

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal level

Part III Other Information

Keyword Syllabus

Sustainability and Social Sustainability; Evaluating Sustainability Projects, Integrating Social Dimensions into Environmental Science; Qualitative Research Methods for Scientists; Field Surveys; Case Research; Interpretative Research; Data Coding and Quantitative Analysis; Research and Professional Ethics.

Reading List

Compulsory Readings

Title	
1	Qualitative Research Methods for the Social Sciences. Bruce Lawrence Berg. Allyn & Bacon, 2009
2	Measuring Sustainability: Learning From Doing. Simon Bell, Stephen Morse. Routledge, 2013
3	Environmental Social Science: Human - Environment interactions and Sustainability Emilio F. Moran. Wiley Blackwell 2011

4	THE SOCIAL SUSTAINABILITY OF CITIES Diversity and the Management of Change Edited by Mario Polèse and Richard Stren. UNIVERSITY OF TORONTO PRESS
5	Colantonio, A. (2007b) Social Sustainability: An exploratory Analysis of its definition, assessment methods, metrics and tools, Oxford Brooks, UK

Additional Readings

Title	
1	Nil