

SEE3202: INTEGRATED SUSTAINABILITY

Effective Term

Semester A 2022/23

Part I Course Overview

Course Title

Integrated Sustainability

Subject Code

SEE - School of Energy and Environment

Course Number

3202

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

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

This course focuses on the production of a dissertation or report on a real-world case study that integrates the materials that students have learnt in the electives. It thus aims to provide the students with the knowledge and principles needed for the

successful integration of academic understanding into practical solutions for a sustainable world. It will be concerned with the notion of sustainable resources, ecosystems and energy, along with the notion of smart cities. The course introduces practical integration of the concepts of economics, social and cultural aspects of our lives with environmental and technical issues that we confront when trying to implement sustainable policy and regulation. The students will learn to apply fundamental understandings to a future sustainable world. They will need to think of adaptation and mitigation along with issues of fairness, intergenerational equity and ethics. There will be considerations of 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 will take a participatory approach to understanding and assessing social sustainability, built on shared knowledge and values and will enable 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. They will integrate these ideas and those addressed in their electives within a dissertation that can focus on the notion of integration in studies of sustainability.

Course Intended Learning Outcomes (CILOs)

CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain the principles embodied in sustainable resources, ecosystems, energy and society more generally.	x		x
2	Develop a knowledge and understanding of the social dimensions to sustainable change.	x	x	
3	Ability to critically examine and evaluate environmental projects in terms of sustainability and social impacts.	x	x	
4	Explore a participatory approach to understanding and assessing the sustainability of our society.		x	x
5	Understand the factors and drivers for change in the human environment, through the use of case studies that form the basis of a dissertation.			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.

Teaching and Learning Activities (TLAs)

TLAs	Brief Description	CILO No.	Hours/week (if applicable)	
1	Lecture	Principles embodied in integrating sustainable resources, ecosystems, energy and society	1, 2, 3, 4, 5	2

2	Tutorial	Learn through case studies and sample data sets, demonstrate techniques and application of smart environmental design	1, 2, 3, 4, 5	1
3	Analysis	analyse a real case and treat this within a dissertation	1, 2, 3, 4, 5	3

Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Dissertation	1, 2, 3, 4, 5	60

Continuous Assessment (%)

60

Examination (%)

40

Examination Duration (Hours)

1.5

Additional Information for ATs

Examination duration: 1.5 hrs

Percentage of coursework, examination, etc.: 60% by dissertation; 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 coursework (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. Dissertation Project

Criterion

Student dissertation will provide an overview of the situation investigated and make a thorough and integrated analysis of how sustainability might be achieved.

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

- Clear and concise written answer, showing knowledge of theoretical background and context
- Where relevant evidence of strong technical understanding of subject and operational procedures
- Where possible give relevant examples and case studies that support argument and answer
- Good spelling and grammar, and structure of ideas

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

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

Reading List

Compulsory Readings

Title	
1	This will develop from specific readings necessary for the case study the students choose to examine.

Additional Readings

Title	
1	Nil