SEE8002: SCIENTIFIC WRITING AND COMMUNICATION

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Scientific Writing and Communication

Subject Code
SEE - School of Energy and Environment
Course Number
8002

Academic Unit
School of Energy and Environment (E2)

College/School
School of Energy and Environment (E2)

Course Duration
One Semester

Credit Units
3

Level
R8 - Research Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
SEE8003 Skills for Scientists

Equivalent Courses
PHY8001 Survival Skills for Research Scientists, SM8402 Research Skills and Methods

Exclusive Courses
Nil

Part II Course Details

Abstract

The course aims to provide training in scientific writing and academic presentation skills, while broadening the scientific horizon of postgraduate students in the fields of energy and environment. Students are taught the basic principles of: (i) logical organization and presentation of research work; (ii) effective scientific writing and drawing; (iii) the scientific journal, submission and review processes; and (iv) development of effective presentation techniques. The course also contributes to the systematic building of self-confidence, providing rational and logical presentation of research results, as well as criticising or defending the conclusions made.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Recognise the objective and motivation of research work, and apply the principles of good scientific writing in presenting abstract, introduction, results, discussion conclusions, figures, tables and references. Students should also recognise the ethics in academic reporting and learn how to develop good habits in writing.	70	x	x	x
2	Present the topics and results of their own research in an organized and rational manner, effectively use data and scientific principles to support rational conclusions and defend them in the discussion part of a research presentation.	10		x	
3	Comment critically on other research presentations and provide constructive ideas to presenters in a self-confident manner.	10	x		
4	Develop skills that enable effective conference attendance, present posters, chair sessions etc.	10		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	Explain some of the key issues relevant to scientific writing and communication	1, 2, 3, 4	1.5
2	In-class tasks	Small exercises to complete and present	1, 2, 3, 4	0.25
3	Write MS	Write as a short paragraph	1, 2, 3	1

4	Defence of views	Be willing to argue in class about their observations	1, 2, 3, 4	0.25

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Written MS, In class participation, Reflective practice	1, 2, 3, 4	100	Pass/Fail- no weighting	No

Continuous Assessment (%)

100

Examination (%)

0

Minimum Continuous Assessment Passing Requirement (%)

0

Minimum Examination Passing Requirement (%)

0

Assessment Rubrics (AR)

Assessment Task

Written MS

Criterion

Student has grasped the basic principles of good scientific writing and recognise the ethics in scientific reporting.

Pass (P)

(P) Achieves the criterion

Failure (F)

(F) Fails to achieve the criterion

Assessment Task

In-class participation

Criterion

Student is able to confidently present research topic and findings in a rational manner, and is able to provide constructive comments to others

Pass (P)

(P) Achieves the criterion - requires attendance at >80% of classes

Failure (F)

(F) Fails to attend >80% of classes

Assessment Task

Short reflective reports on all classes

Criterion

Student is able to reflect on the relevance of communication in their own specialist discipline.

Pass (P)

(P) Adequate reflection

Failure (F)

(F) Inadequate reflection

Part III Other Information

Keyword Syllabus

Nil

Reading List

Compulsory Readings

	Title
1	Ian Mills, Tomislav Cvita, Klaus Homann, Nikola Kallay And Kozo Kuchitsu, Quantities, Units and Symbols in Physical Chemistry Blackwell
2	A range of on-line materials

Additional Readings

	Title
1	Nil