EE8001: GUIDED STUDIES

Effective Term
Semester B 2024/25

Part I Course Overview

Course Title
Guided Studies

Subject Code
EE - Electrical Engineering
Course Number
8001

Academic Unit
Electrical Engineering (EE)

College/School
College of Engineering (EG)

Course Duration
One Semester

Credit Units
3

Level
R8 - Research 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 aims to (a) broaden and deepen the student's knowledge and understanding of a selected subject area relevant to the student’ s research; (b) provide guidance to the student in developing research methodology; and (c) strengthen the student's writing and presentation skills.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Review and critique the body of knowledge from a literature search of the given subject area	20	x		
2	Identify the issues of significance in the selected subject area based on the literature search	20	x		
3	Define and formulate a formal problem statement of the research to be undertaken	20		x	
4	Outline the appropriate research methodology	20		x	
5	Communicate technical contents effectively in writing and presentation	20			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	Independent studies	Students are guided to select a number of recent/seminal journal papers for review after an extensive literature search.	1, 2, 3, 4	
2	Regular meetings and discussion with supervisor(s)	Regular meetings with the supervisor on the research topic (e.g. in the form of group/individual meetings) at their agreed intervals	1, 2, 3, 4, 5	

3	Report writing	Students are expected to conduct in-depth review of relevant literature from the literature search; critique the existing body of knowledge and lay the necessary foundation for the proposed research. The student may also conduct preliminary data gathering and analysis or case studies, where applicable.	5	
4	Workshop(s)	Discussing the writing and presentation skills. Students will be asked to complete exercises for practising the skills they learnt.	5	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Report	1, 2, 3, 4, 5	50	Graded by the Qualifying Panel and the Supervisor
2	Workshop presentation	1, 4, 5	25	Graded by the Course Leader(s)
3	Workshop participation	1, 4, 5	25	Graded by the Course Leader(s)

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)

Assessment Task

Report

Criterion

Summarizing the subject area from a thorough literature search.

Pass (P)

(P) Satisfactorily produce an original written report on the selected subject area.

Failure (F)

(F) Fail to produce an original written report on the selected subject area.

Assessment Task

Workshop presentation

Criterion

Presenting the subject area from the literature search.

Pass (P)

(P) Satisfactorily present the selected subject area.

Failure (F)

(F) Fail to present the selected subject area.

Assessment Task

Workshop participation

Criterion

Participation in discussions and raising questions for other student speakers.

Pass (P)

(P) Attendance and participation in the workshop(s).

Failure (F)

(F) Fail to attend the workshop(s).

Part III Other Information

Keyword Syllabus

Generally, the course involves literature search skills, communication skills, presentation, technical writing, etc.. Specifically, the individual subject area is to be identified by the research student and the Supervisor. It would belong to a list of areas, including but not limited to, Applied Electromagnetics; Bioinformatics and Bioengineering; Communications; Computer Systems; Dynamics and Control; Electronic Systems and Devices; Intelligent Systems; Multimedia Technology; Nanotechnology and Microsystems; Networking; Optoelectronics; Power and Energy; etc..

Reading List

Compulsory Readings

	Title
1	Depending on the specific area, the students are guided by the supervisors to select a number of recent/seminal journal papers for review. The selection of papers should generally follow the guidelines below: (a) it should contain no less than 10 research papers, technical reports, theses, or monographs; (b) at least 4 papers should be published within the past 4 years; and (c) at least 6 papers should be full-length papers (i.e. normally no less than 6 pages in the IEEE Transaction/Journal format, or its equivalents)

Additional Readings

	Title
1	Nil