CA6536: DISSERTATION - BUILDING ENVIRONMENT AND SUSTAINABILITY

Effective Term
Semester B 2024/25

Part I Course Overview

Course Title
Dissertation - Building Environment and Sustainability

Subject Code
CA - Civil and Architectural Engineering
Course Number
6536

Academic Unit
Architecture and Civil Engineering (CA)

College/School
College of Engineering (EG)

Course Duration
Non-standard Duration

Other Course Duration
2 Semesters + 1 Summer Term
(Some courses offered in Summer Term may start a few weeks earlier than the normal University schedule. Please check the teaching schedules with CLs before registering for the courses.)

Credit Units
0-9

Level
P5, P6 - Postgraduate Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

To guide students to develop project theme with useful objectives. To learn relevant research tools in research projects.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	analyze building environment and sustainability problems in depth;		x	x	x
2	apply formal techniques in report writing and oral presentation;		x	x	x
3	propose an innovative and effective solution to a building environment and sustainability problem, which is better than those derived from conventional approaches;		x	x	x
4	apply stream specific research procedures to arrive at findings.		x	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	Meetings and discussions	Weekly meeting between students and their respective supervisors	1, 2, 3, 4	
2	Oral presentation	The final oral presentation	1, 2, 3, 4	
3	Thesis writing	The final thesis report	1, 2, 3, 4	

Additional Information for LTAs

Semester Hours: 3 hours per week

Lecture/Tutorial/Laboratory Mix: Lecture/Tutorial/Laboratory (3)

3 hours project supervision

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Thesis and final oral presentation	1, 2, 3, 4	100	

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)

Assessment Task

Thesis and final oral presentation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

1.1 ABILITY to EXPLAIN the methodology and procedure with ACCURACY in using the modelling techniques in the area of building environment and sustainability.
1.2 CAPACITY for SELF-DIRECTED LEARNING to understand the principles of a stream specific research topic.
1.3 ABILITY to APPLY the scientific techniques in solving theoretical and application problems of a stream specific research topic.
1.4 ABILITY to COMMUNICATE and PRESENT scientific information effectively and confidently.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Thesis and final oral presentation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

1.1 ABILITY to EXPLAIN the methodology and procedure with ACCURACY in using the modelling techniques in the area of building environment and sustainability.
1.2 CAPACITY for SELF-DIRECTED LEARNING to understand the principles of a stream specific research topic.
1.3 ABILITY to APPLY the scientific techniques in solving theoretical and application problems of a stream specific research topic.
1.4 ABILITY to COMMUNICATE and PRESENT scientific information effectively and confidently.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Basic

Failure

(F) Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

Each student will be assigned under a supervisor based on the stream and interest of the student and each supervisor supervises not more than five students. The exact theme of dissertation is a result of discussion and compromise between the student and the supervisor. The actual topic of research must be in line with the stream taken by the student and problems related to the daily works of students should first be looked into. Each student should submit a dissertation together with an oral presentation in front of an assessment panel.
In addition to the dissertation and oral presentation, students may be required to attend at least 2 research seminars on research tools recommended by the supervisor. Within each semester, at least one research seminar (normally three in Semester A, three in Semester B and one in Semester Summer) will be organised by the department on research tools covering analytical methods, mathematical models, statistics, stochastic models, optimization and computer simulations etc. Supervisors may also recommend students to attend research seminars organised by other departments within the university when such seminars are relevant and useful to the dissertation project.

Reading List

Compulsory Readings

	Title
1	Nil

Additional Readings

	Title
1	Nick Moore (2006) How to do research: a practical guide to designing and managing research project, Facet, London.