CA4516: FINAL YEAR PROJECT

Effective Term
Semester A 2024/25

Part I Course Overview

Course Title
Final Year Project

Subject Code
CA - Civil and Architectural Engineering
Course Number
4516

Academic Unit
Architecture and Civil Engineering (CA)

College/School
College of Engineering (EG)

Course Duration
Two Semesters

Credit Units
0-6

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

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
CA3122 Engineering Analysis, and CA3144 Engineering Surveying, and CA3168 Building Information Modelling for Capital Projects, and CA 3619 Design of Structural Elements, and CA3632 Mechanics of Structures & Materials, and CA3633 Structural Analysis, and CA3634 Reinforced & Prestressed Concrete Structures, and CA3677 Hydraulics and Hydrology, and CA3686 Construction Contract and Management, and CA3687 Soil Mechanics, and CA3704 Construction Engineering. Students must have attempted (including class attendance, coursework submission, and examination) the precursor course(s) so identified.

Equivalent Courses
BC4516/BC4516P Final Year Project

Exclusive Courses
Nil

Part II Course Details

Abstract

The aim of the final year project is to give students the opportunity to demonstrate both their academic quality and their ability to carry out a substantial piece of independent research and/or development work, and in the process to allow them to illustrate their expertise in a chosen subject area related to the course. In undertaking the final year project, the student will be able to demonstrate his/her initiative and intellectual achievement, his/her comprehension of the chosen subject matter, and his/her capacity of employing the theoretical principles in practical situations. The student will also develop and demonstrate his/her ability to manage and present the end product in a precise and coherent manner.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	organise and design a substantial piece of individual research and development work;				x
2	critically assess literature and material data relevant to the chosen area;				x
3	pursue and discover an area of an academic discipline of the course to substantial depth;				x
4	utilize and apply appropriate theory and techniques developed during the course to the chosen area; and				x
5	communicate effectively in writing a programme of work and, if required, orally defend the final product in a logical, precise and coherent manner.				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, 4, 5	
2	Oral presentation	Interim oral presentation in the first semester and final oral presentation in the second semester	1, 2, 3, 4, 5	

3	Report and thesis writing	Submission of interim report in the first semester and a complete thesis in the second semester	1, 2, 3, 4, 5	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Interim report and presentation	1, 2, 3, 4, 5	40	
2	Thesis and final oral presentation	1, 2, 3, 4, 5	60	

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)

Assessment Task

Interim report and presentation

Criterion

1.1 ABILITY to EXPLAIN the methodology and procedure with ACCURACY in using the modelling techniques.
1.2 CAPACITY for SELF-DIRECTED LEARNING to understand the principles of a specific research topic.
1.3 ABILITY to APPLY the scientific techniques in solving theoretical and application problems of a 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

Criterion

2.1 ABILITY to EXPLAIN the methodology and procedure with ACCURACY in using the modelling techniques.
2.2 CAPACITY for SELF-DIRECTED LEARNING to understand the principles of a specific research topic.
2.3 ABILITY to APPLY the scientific techniques in solving theoretical and application problems of a specific research topic.

2.4 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

Part III Other Information

Keyword Syllabus
Students are required to undertake individual supervised research and final year project preparation.

Reading List

Compulsory Readings

	Title
1	Nil

Additional Readings

	Title
1	Anderson, J and Millicent, P. (2001), "Assignment and Thesis writing", 4th Edition, Wiley, Brisbane, Australia.
2	Fellows, R. and Liu, A.M.M. (1997), "Research Methods for Construction", 1st Edition, Blackwell Science Ltd., London, U.K.
3	Mauch, J.E. and Birch, J. W. (1998) "Guide to the Successful Thesis and Dissertation: A Handbook for Students and Faculty", 4th Edition, Publisher: M. Dekker, New York.
4	Naoum, S.G.(1998), "Dissertation research and writing for construction students", Butterwort-Heinemann, Oxford, U.K.
5	Preece Roy (1994), "Starting Research: An Introduction to Academic Research and Dissertation Writing", Printer Publishers, London.
6	Swernam, Derek (2000), "Writing your dissertation: how to plan, prepare and present successful work", How to Books Oxford Publishers, U.K.