CA6538: DISSERTATION – DIGITAL CONSTRUCTION MANAGEMENT

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Dissertation – Digital Construction Management

Subject Code
CA - Civil and Architectural Engineering
Course Number
6538

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

The aim of the dissertation is to give the opportunity to students to demonstrate their ability to carry out an independent piece of research and development work, and to develop expertise and an aptitude towards discovery in a chosen subject area related to the course through the application of theory and techniques provided by the course. This will take the form of a substantial study in a subject area related to construction project management / real estate project management, largely through the exercise of independent inquiry.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	demonstrate the ability to exercise judgement, independent thought, initiative, intellectual achievement, understanding of the chosen subject matter, as well as an aptitude towards discovery;		x	x	x
2	manage a substantial piece of individual research and development work in digital construction management;		x	x	x
3	practise an area of academic discipline of the course to substantial depth;		x	x	x
4	search, select and critically evaluate literature and material relevant to the area of digital construction management;		x	x	x
5	apply some of the theory and techniques developed during the course to the area of digital construction management;		x	x	x
6	communicate effectively in writing a programme of work and, orally defend the dissertation in a logical, precise and coherent manner.		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, 5, 6	
2	Oral presentation	The final oral presentation	1, 2, 3, 4, 5, 6	
3	Thesis writing	The final thesis report	1, 2, 3, 4, 5, 6	

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 ("-" for nil entry)	Allow Use of GenAI?
1	Thesis and final oral presentation	1, 2, 3, 4, 5, 6	100		Yes

Continuous Assessment (%)

100

Minimum Continuous Assessment Passing Requirement (%)

40

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.
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 (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.
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) Significant

Marginal

(B-, C+, C) Basic

Failure

(F) Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

There is no fixed formal syllabus. Students will be required to undertake individually supervised research and a dissertation. A departmental publication is provided giving details of requirements, timing, and considerations necessary for the successful completion, on time, of the course.

In addition to the research skills gained earlier in the course, one formal 3 hour teaching session will be arranged in week 1 of the Summer Term in order to review the necessary research skills and to ensure that all students are thoroughly familiar with the requirements of the Dissertation.

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.