

CA4522: INTEGRATED BUILDING PROJECT DEVELOPMENT (CONSTRUCTION ENGINEERING AND MANAGEMENT)

Effective Term

Semester A 2022/23

Part I Course Overview

Course Title

Integrated Building Project Development (Construction Engineering and Management)

Subject Code

CA - Civil and Architectural Engineering

Course Number

4522

Academic Unit

Architecture and Civil Engineering (CA)

College/School

College of Engineering (EG)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's 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 integrated building project development is to provide students the opportunity to demonstrate their ability to develop a building project, as initiated by a client, from its preliminary design phase to construction planning through teamwork with students of other disciplines. In undertaking the course, the student will be able to demonstrate his/her capability of interpreting the client's requirements and transforming them into feasible solution. The student will also develop and demonstrate his/her capacity to apply project planning and construction techniques and contribute to the accomplishment of the requirements of the project client. In addition, students should be able to communicate with his/her teammates, to comprehend how problems of different disciplines are resolved, and to report and present his/her work as a part of the integrated building project outcome.

Course Intended Learning Outcomes (CILOs)

CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Develop criteria based on the client's requirements and develop a conceptual solution based on the criteria.			x
2	Define the key issues of own discipline and comprehend other members' disciplines.	x		
3	Project development and appraise construction plan(s).		x	
4	Review safety/environmental issues of construction plan(s).		x	
5	Create practical solution(s) through teamwork with members of other disciplines.			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.

Teaching and Learning Activities (TLAs)

TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures and team meetings	Students from various disciplines will form groups to carry out the project. A supervisor will be assigned to each group to facilitate lectures and team meetings on a weekly base.	1, 2, 3, 4, 5

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Oral presentations / written submissions / group discussions	1, 2, 3, 4, 5	100	

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)**Assessment Task**

Oral presentations / written submissions / group discussions

Criterion

Oral presentation

1.1 ABILITY to COLLABRATE to form a teamwork

1.2 ABILITY to ORGANIZE the presentation

1.3 ABILITY to clearly PRESENT the contents (including the use of English, eye contact, voice, and the use of technology)

Written submission

2.1 ABILITY to COLLABRATE as a team

2.2 ABILITY to ORGANIZE the submission

2.3 ABILITY to USE students' discipline specific knowledge in the project

2.4 ABILITY to graphically PRESENT the solutions

2.5 ABILITY to CONCLUDE the findings

Group discussion

3.1 ABILITY to COMMUNICATE and ORGANIZE

3.2 ABILITY to have INDEPENDENT and CRITICAL THINKING

3.3 ABILITY to have CREATIVE ideas

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

Teamwork, interpretation of client's brief, problem identification, feasible solution generation, project planning, construction technology, safety and environmental management, key details production, report production and presentation

Reading List

Compulsory Readings

Title	
1	Nil

Additional Readings

Title	
1	Roy Meador, Guidelines for preparing proposals, 2nd edition, Lewis Publishers, 1991
2	Ros Jay, How to write proposals and reports that get results, Pitman, 1994
3	Simon Mort, Professional report writing, Gower, 1992
4	Chartered Institute of Building, Code of practice for project management for construction and development, 4th edition, Wiley-Blackwell, 2010
5	Frank Harris, Ronald McCaffer and Francis Edum-Fotwe, Modern construction management, 7th edition, Wiley-Blackwell, 2013
6	Caroline Chan and Hoi-Cheung Sin, Construction project management – from theory to practice, Prentice Hall, 2009