

CA4630: BUILDING DESIGN AND APPRAISAL

Effective Term

Semester A 2022/23

Part I Course Overview

Course Title

Building Design and Appraisal

Subject Code

CA - Civil and Architectural Engineering

Course Number

4630

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

CA3171 Construction Technology and Structural Planning, or CA3618 Construction Technology, or CA3703 Construction Methods and Equipment, or CA3629 Building and Fire Safety Control

Students must have attempted (including class attendance, coursework submission, and examination) the precursor course(s) so identified.

Equivalent Courses

BC4630/BC4630F Building Design and Appraisal / SE4630 Heritage and Building Appraisal

Exclusive Courses

CA4178 Heritage and Building Appraisal

Part II Course Details

Abstract

This course is designed to integrate all aspects of technology and design previously studied. The program builds upon that knowledge to consider the building holistically. It aims to provide the students: (1) an introduction to the design process and design methodologies; (2) an understanding of the principal factors which influence the design of accommodating and an appraisal of the built environment; (3) an understanding of models of design process; design thinking; aesthetic and visual considerations; and other building design knowledge; and (4) an understanding to determine the building performance in respect of design, construction and statutory requirements by critically evaluating their interaction.

Course Intended Learning Outcomes (CILOs)

CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1 relate the design of simple spaces with the needs and requirements of human activities in terms of space and appraise the built environment;		x	x	
2 critically analyze the principles of building design and appraisal of design process;			x	
3 hypothesize the suitability of new and existing building designs and assess the ease with which they can be altered;			x	
4 generate proposals on design alterations, renovations and refurbishment.			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.

Teaching and Learning Activities (TLAs)

TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1 Lectures	On topics related to CILOs and Keyword Syllabus	1, 2, 3, 4	
2 Tutorials	In class exercise and discussion related to lecture topics	1, 2, 3, 4	

Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1 Assignment #1	1, 4	15	
2 Assignment #2	2	20	

3	Assignment #3	3, 4	15	
4	Mid-term test	1, 2	20	

Continuous Assessment (%)

70

Examination (%)

30

Examination Duration (Hours)

2

Additional Information for ATs

To pass a course, a student must obtain minimum marks of 30% in both coursework and examination components, and an overall mark of at least 40%

Assessment Rubrics (AR)**Assessment Task**

Assignment #1

Criterion

ABILITY to DISCUSS, INVESTIGATE, EXPLORE and ORGANISE: The principles of the design process, of design evaluation and of building survey and appraisal as applied to building design, including to existing buildings.

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

Assignment #2

Criterion

ABILITY to DISCUSS, INVESTIGATE, EXPLORE and ORGANISE: The principles of the design process, of design evaluation and of building survey and appraisal as applied to building design, including to existing buildings.

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

Assignment #3

Criterion

ABILITY to DISCUSS, INVESTIGATE, EXPLORE and ORGANISE: The principles of the design process, of design evaluation and of building survey and appraisal as applied to building design, including to existing buildings.

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

Mid-term test

Criterion

ABILITY to UNDERSTAND and APPLY theories and knowledge in topics related to building design and appraisal.

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

Examination

Criterion

ABILITY to UNDERSTAND and DISCUSS theories and knowledge in topics related to sustainability, building forms, and high-performing buildings.

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**

Spatial design and planning for building and environment. Design Process. Design consideration for alterations, renovations and refurbishment works. Building and environment appraisal. Case studies.

Reading List**Compulsory Readings**

Title	
1	Assessing Building Performance / Wolfgang F.E. Preiser, Jacqueline Vischer, editors; New York : Routledge, 2012.

Additional Readings

Title	
1	Building design : improving commercial spaces / Elyse Umlauf, Phil Schreiner. , Umlauf, Elyse. [Glen Cove, N.Y.] : Library of Applied Design, c1990.
2	Building design for handicapped and aged persons / Council on Tall Buildings and Urban Habitat, Committee 56 ; Gilda M. Haber, chairman ; Thomas O. Blank, editor ; contributors, Thomas O. Blank ... [et al.]. , New York : McGraw-Hill, c1992.
3	Journal of Building Survey, Appraisal & Valuation / Simon McLean, editor; Daryn Moody, ISSN (print): 2046-9594; ISSN(web): 2046-9608.