CA3184B: ARCHITECTURAL DESIGN 4: EMERGENT SPACE FORM (TOPIC 2)

Effective Term
Semester A 2022/23

Part I Course Overview

Course Title
Architectural Design 4: Emergent Space Form (Topic 2)

Subject Code
CA - Civil and Architectural Engineering
Course Number
3184B

Academic Unit
Architecture and Civil Engineering (CA)

College/School
College of Engineering (EG)

Course Duration
One Semester

Credit Units
6

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

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
CA29113 Integrated Studio - High-Rise Buildings (Topic 1); or CA29123 Integrated Studio - High-Rise Buildings (Topic 2); or CA29133 Integrated Studio - High-Rise Buildings (Topic 3); or CA29103 Integrated Studio - High-Rise Buildings; or BST21083 Integrated Studio - High-Rise Buildings

Precursors
Nil

Equivalent Courses
CA3184 Architectural Design 4: Emergent Space Form; SE3647 Architectural Design 4: Emergent Space Form; CA3184A Architectural Design 4: Emergent Space Form (Topic 1)

Exclusive Courses
Nil

Part II Course Details

Abstract

This course aims to enhance students' understanding of architectural design as a configuration of negative space in relation to positive form. The emphasis is on developing a set of analytical and design tools to explore spatial strategies and configurations in design precedents, and apply the findings to inform decisions in the architectural design process. Through a specific topic selected by the studio tutor, students will explore various themes relating to the development of a spatial configuration based on predetermined design intentions.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Develop and implement a systematic design process to produce solutions that focus on the spatial properties of architectural design.			x	
2	Analyse design precedents to discover key concepts and strategies employed in terms of spatial design and configuration.			x	
3	Generate space form design concepts and evaluate architectural design options concepts through digital and physical models.				x
4	Articulate and compose architectural elements to define the established spatial qualities, strategies and configuration.				x
5	Communicate the design process and solution using graphic and verbal presentations.			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	Design Project	Design Project engages students in the production of an integrated proposal for a building design of a specific topic in response to a set of constraints and requirements. Teaching and learning are conducted through regular studio classes in which students will develop their individual design proposals under the facilitation of a studio tutor.	1, 2, 3, 4, 5	8 hrs/ week

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Assignments	1, 2	30	
2	Interim Presentation (Design development sketches and models)	3	20	
3	Final Presentation (Synthesis of analysis and development into a design solution)	3, 4, 5	50	

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)

Assessment Task

1. Assignments

Criterion

1.1 Demonstrate ability to conduct comprehensive analysis on design precedents to discover key concepts and strategies employed in terms of spatial design and configuration.in relation to the requirements of the specific studio topic.
1.2 Review relevant information from various sources systematically to produce design solutions that focus on exploring and evaluating the spatial properties of architectural design options.

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal level

Assessment Task
2. Interim Presentation (Design development sketches and models)

Criterion
2.1 Formulation of design strategies in architectural design and evaluate their effectiveness in relation to the concept of space form generation.

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal level

Assessment Task
3. Final Presentation (Synthesis of analysis and development into a design solution)

Criterion
3.1 Demonstrate ability to generate space form design concepts and evaluate architectural design options concepts through digital and physical models.
3.2 Production of innovative architectural design proposals through articulation and composition of architectural elements to define the established spatial qualities, strategies and configuration.

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal level

Part III Other Information

Keyword Syllabus
Architectural and spatial design; generation of design ideas; architectural ideas and design process; evaluation of architectural design ideas; architectonics; architectural design theories and methods; design problem formulation; in-between space; spatial organisation and relationships; spatial configurations; built form studies and analysis.

Reading List

Compulsory Readings

	Title
1	Drake, S. (2005). "The Chiasm and the Experience of Space: Steven Holl's Museum of Contemporary Art, Helsinki." Journal of Architectural Education 59(2): 53-59.
2	Hertzberger, H. (2000). Space and the Architect: Lessons in Architecture 2. Rotterdam: 010 Publishers.
3	Hillier, B. (1996). Space is the Machine: A Configurational Theory of Architecture. Cambridge: Cambridge University Press.
4	Laseau, P. (2001). Graphic thinking for architects & designers (3rd ed). New York: J. Wiley.
5	Mitchell, W. (1990). The Logic of Architecture: Design, Computation, and Cognition. Cambridge: The MIT Press.
6	Rifkind, D. (2011). "Misprision of Precedent: Design as Creative Misreading." Journal of Architectural Education 64(2): 66-75.
7	Tschumi, B. (1996). "Questions of Space." Architecture and Disjunction. Cambridge: The MIT Press, 53-63.
8	Vidler, A. (2000). Warped Space: Art, Architecture, and Anxiety in Modern Culture. Cambridge: The MIT Press.
9	Wampler, J. (1993). "The Space Between." Places 8(4): 68-71.
10	Wampler, J. (1993). "Exploring Prototypes." Places 8(4): 76-79.

Additional Readings

	Title
1	Nil