CA4415: VALUE MANAGEMENT

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Value Management

Subject Code
CA - Civil and Architectural Engineering
Course Number
4415

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
CA2126 Measurement of Building Works and CA2213 Development Economics (for Surveying students)

Nil (for Architecture students)

Precursors
Nil

Equivalent Courses
BC4415/BC4415F Value Management

Exclusive Courses
Nil

Part II Course Details

Abstract

The course aims to apply systematic decision techniques in an inter-disciplinary professional context for creating new ides to solve the practical problems in construction projects.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Solve construction problems based on the systematic job plan;		x		
2	Analyze function of a design or product;			x	x
3	Allocate cost and worth to function;			x	x
4	Brainstorm wild ideas by creative techniques;			x	x
5	Invent VE proposals by various Value Engineering techniques;				x
6	Perform as a member of VE team.				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	Lecture	Topics related to each phase of the job plan	1, 2, 3, 4, 5	
2	Workshop	Students need to work for a project based on the knowledge learned.	1, 2, 3, 4, 5, 6	
3	Presentation	Students need to present their work frequently.	2, 3, 4, 5, 6	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Quiz	1, 2, 3	20	Nil	No
2	Assignment	1, 2, 3, 4, 5, 6	60	Nil	Yes

Continuous Assessment (%)

80

Examination (%)

20

Examination Duration (Hours)

1

Minimum Continuous Assessment Passing Requirement (%)

30

Minimum Examination Passing Requirement (%)

30

Additional Information for ATs

Coursework: 80% (20% test; 60% assignment) (a real project is conducted throughout the semester) 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

Quiz

Criterion

1. Ability to understand the job plan and analyze the function and the cost in VM concept

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

Criterion

1. Attitude to raise questions from the given information for a product or design
2. Ability to adopt various VM techniques for solving practical problems
3. Accomplish to enhance the value of product

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
1. Attitude to discover the hidden value from the scenarios
2. Capacity to discuss the problem solving based on VM knowledge
3. Ability to adopt various VM techniques for solving practical problems
4. Accomplish to enhance the product’ s value

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

- VE background (history, VA /VE /VM, Value, Cost and Worth)
- Overall VE Procedures (Charette, Standard 40-hour workshop, Package review, Contractor's change proposal and Value management audit)
- VE techniques (Job Plan, Functional analysis, FAST diagram, Cost analysis, Creative technique, Evaluation, Development)

Reading List

Compulsory Readings

	Title
1	Nil

Additional Readings

	Title
1	Dell'Isola A. (1997) "Value Engineering: Practical Applications". Kingston, Mass.: R.S. Means Company.
2	Fong S.W., Shen Q.P., Chiu E.W.I. and Ho C.M.F. (1998) "Applications of Value Management in the Construction Industry in Hong Kong". Department of Building and Real Estate, The Hong Kong Polytechnic university

3	Green S., Popper P. (1990) "Value Engineering - The Search For Unnecessary Cost", The Chartered Institute of Builder
4	Kelly J. (2015) "Value Management of Construction Projects", Oxford: Blackwell Science
5	Kelly J. Male S. (1993) "Value Management in Design and Construction". U.K.: E & FN Spon
6	Norton B.R. McElligott W.C. (1995) "Value Management in Construction: a Practical Guide", England: Macmillan
7	Park D.E. (1998) "Value Engineering Theory", Lawrence D. Miles Foundation, U.S.A.: Washington DC
8	Zimmerman L.W. Hart G.D (1982) "Value Engineering: a Practical Approach for Owners, Designers, and Contractors". New York: Van Nostrand Reinhold
9	Value Management: its Place in the Construction Industry [videorecording], London: Einstein Network
10	SAVE International Conference Proceedings, USA: SAVE
11	HKIVM International Conference Proceedings, HK: HKIVM
12	The Value Manager. H.K.: Hong Kong Institute of Value Management
13	Value World, Irving, Tex, U.S.A. : Society of American Value Engineers
14	Lawrence Delos Miles Value Foundation , http://www.valuefoundation.org/
15	SAVE International "The Value Society" , http://www.value-eng.org/
16	The Institute of Value Management , http://www.ivm.org.uk/
17	Value Engineering Analysis and Management Academic Community, http://www.brookes.ac.uk/other/veamac/
18	Hong Kong Institute of Value Management , http://www.hkivm.com.hk/
19	Behaviour Construction Management , http://bcm.cityu.edu.hk/