

## Form 2B

# City University of Hong Kong

## Information on a Course

offered by Department of Architecture and Civil Engineering  
with effect from Semester A in 2014/2015

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### Part I

<b>Course Title:</b>	Decision Analysis
<b>Course Code:</b>	CA6110
<b>Course Duration:</b>	1 Semester (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.)
<b>Credit Units:</b>	3
<b>Level:</b>	P6
<b>Medium of Instruction:</b>	English
<b>Prerequisites:</b>	Nil
<b>Precursor:</b>	Nil
<b>Equivalent Courses:</b>	BC6110 Decision Analysis
<b>Exclusive Courses:</b>	Nil

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### Part II

#### Course Aims:

This course aims to enrich students' knowledge and skills in business decision-making process in construction industry. Theories and techniques of decision analysis with relevance to engineering management are introduced. Topics will cover principles of descriptive and inferential statistics, sampling and surveying methods, operations research methods and mathematical modeling.

#### Course Intended Learning Outcomes (CILOs):

Upon successful completion of this course, students should be able to:

No.	CILOs	Weighting (if applicable)
1.	explain the conceptual framework of various decision analysis theories	---
2.	relate the theories to the analysis of managerial problems in the context of construction industry;	---
3.	apply various quantitative and qualitative analysis skills to decision-making process of construction and/or development projects.	---

## Teaching and Learning Activities (TLAs):

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

**Semester Hours:** - hours per week

**Lecture/Tutorial/Laboratory Mix:** Lecture (-); Tutorial (-); Laboratory (-)

Lec: 2 hrs x 2 days/wk Tut: 1 hr x 2 days/wk Lab/Others: 0 hr(s)/wk. The course is offered in Summer Term. Students are required to attend 2 lectures and 2 tutorials per week for 7 weeks.

CILO No.	TLAs	Total Hours (if applicable)
CILO 1	<ul style="list-style-type: none"><li>Lectures and Scenario Type Tutorials</li></ul>	9
CILO 2	<ul style="list-style-type: none"><li>Lectures and Scenario Type Tutorials</li></ul>	12
CILO 3	<ul style="list-style-type: none"><li>Lectures and hand-on exercise, Scenario Type Tutorials</li></ul>	18

## Assessment Tasks/Activities:

(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

**Coursework:** 50%

**Examination:** 50% (Examination duration = 2 hours)

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%.

CILO No.	Type of assessment tasks/activities	Weighting (if applicable)	Remarks
CILO 1	<ul style="list-style-type: none"><li>End-term Examination: question(s) in these areas</li></ul>	---	<ul style="list-style-type: none"><li>Nil</li></ul>
CILO 2	<ul style="list-style-type: none"><li>• Assignment: application in analyzing managerial problems in given scenarios</li><li>• End-term Examination: question(s) in these areas</li></ul>	---	<ul style="list-style-type: none"><li>• Nil</li></ul>
CILO 3	<ul style="list-style-type: none"><li>• Assignment: apply quantitative and qualitative decision-making tools in scenarios problems</li><li>• End-term Examination: question(s) in these areas</li></ul>	---	<ul style="list-style-type: none"><li>• Nil</li></ul>

## Grading of Student Achievement:

### Grading Pattern:

Standard

Refer to Grading of Courses in the Academic Regulations for Taught Postgraduate Degrees.

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## Part III

### Keyword Syllabus:

Cost concepts for decision making; Quantitative analysis techniques including principles of descriptive and inferential statistics, sampling and surveying methods, operations research methods, mathematical modeling.

### Recommended Reading:

- **Texts:**
    1. Bonini, C. P. Hausman, W.H. and Bierman, H. 1997, Quantitative Analysis for Management, 9th edition, Irwin, Chicago. [HD30.25 .B53 1997]
    2. Davis, D. 2005, Business Research for Decision Making, 6th edition, Thomson/Brooks/Cole, Belmont. [HD30.4 .D38 2005]
    3. Oakshott, L. 2009, Essential Quantitative Methods for Business Management & Finance, 4th edition, Palgrave Macmillan, New York. [HF5691 .O243 2009]
    4. Cook, A. E. 1991, Construction Tendering: Theory and Practice, B.T. Batsford/CIOB, London. [TH435 .C727 1991]
    5. LaForge, R.L. and Kroeber, D.W. 1980, The Manager's Guide to Statistics and Quantitative Methods, McGraw-Hill, New York. [Shatin Branch - C0032805]
    6. Boussabaine, A.H. 1996, 'The use of ANN in construction management: a review', Construction Management and Economics, Vol 14, Issue 5, pp 427-436. [HD9715.A1 C667]
    7. Fausett, L.V. 1994, Fundamentals of Neural Networks: Architectures, Algorithms, and applications, Prentice-Hall, Englewood Cliffs. [QA76.87 .F38 1994]
    8. Bauer, R. J. (1994), Genetic Algorithms and Investment Strategies, Wiley, New York. [HG4515.2 .B38 1994]
  - **Online Resources:**
    1. Nil
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