City University of Hong Kong
Course Syllabus

offered by Department of Management Sciences
with effect from Semester A 2017 / 2018

Part I Course Overview

Course Title:	Quantitative Analysis Project
Course Code:	MS6713
Course Duration:	Two Semesters
Credit Units:	6
Level:	P6
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: *(Course Code and Title)*	Nil
Precursors: *(Course Code and Title)*	MS5212 Statistical Methods I MS5213 Statistical Methods II
Equivalent Courses: *(Course Code and Title)*	Nil
Exclusive Courses: *(Course Code and Title)*	Nil

Part II Course Details

1. Abstract

The course aims to

- develop students' analytic ability to integrate and apply quantitative skills, in particular statistical and data analytic techniques, learned in the programme to solve a real-world business problem;
- develop students' ability in planning, conducting and managing a real-life business problem project;
- provide students with an opportunity to develop their skills, in oral presentation and written report, of the findings of their project.

2. Course Intended Learning Outcomes (CILOs)

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

No	CILOs	Weighting	Discovery-enriched curriculum related learning outcomes		
			A1	*A2*	*A3*
1.	Translate a real problem into a problem statement from unstructured initial ideas, identify the key issues and design a research plan to solve the problems systematically.	15%	✓	✓	
2.	Devise an efficient plan to collect relevant data and information for analysis, and apply appropriate statistical and business intelligence techniques using computing software to analyze the data effectively.	40%		✓	✓
3.	Propose recommendations and solutions based on the analysis results and evaluate the results in the context of the project problem.	25%	✓	✓	✓
4.	Present, through oral presentation and written report, the findings and recommendations of their project; and discuss the implications of the results.	20%	✓	✓	✓
		100%			

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 self-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.

3. Teaching and Learning Activities (TLAs)

TLA	Brief Description	CILO No.				Hours/week
		1	2	3	4	
1, 4	Regular meeting with a supervisor: Students have to meet and discuss the project with their supervisor regularly.	✓	✓	✓		N.A.
1, 2, 3	Guided discovery learning: Students receive advice and suggestions from their supervisor during the meetings.	✓	✓	✓		
1, 2, 3	Designing a data collection plan & conducting research: Students, under the supervision of their supervisor, design the data collection plan and conduct the analysis using appropriate statistical methods.	✓	✓	✓		N.A.
1, 2, 3, 4	Presentations of project's progress: Students present their ideas and progress of the project in the meetings.		✓	✓	✓	N.A.

4. Assessment Tasks/Activities (ATs)

Assessment Tasks/Activities	CILO No.				Weighting	Remarks
	1	2	3	4		
Continuous Assessment: 100%						
Project Proposal: Assessed by supervisor and moderator based on the objective and significance of the proposed study, statement of problem, description of methodologies used, research steps and schedule, proposal presentation and organization.	✓	✓			10%	N.A.
Project Progress: Assessed by supervisor based on the student's ability to plan and control the project development, and also based on the student's initiative and creativity.	✓	✓	✓		15%	N.A.
Oral Presentation: Assessed by supervisor and moderator on the ability to present and defend the results of the project.	✓	✓	✓	✓	15%	N.A.
Project Report: Assessed by supervisor and moderator on the presentation of results and quality of work presented in the report. Students have to demonstrate the ability to formulate the problem correctly, analyze and explore issues related to the problems using appropriate statistical techniques. They have to propose efficient solutions and/or recommendations based on the analysis and evaluate the results in the context of the project problem.	✓	✓	✓	✓	60%	N.A.
					100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
Proposal	Ability to define and design plan to solve the proposed business problem	Strong evidence of showing ability to define, formulate and plan the solution of the problems. Highly effective use of language and excellent presentation skills.	Evidence of showing ability to define, formulate and plan the solution of the problems. Effective use of language and good presentation skills.	Some evidence of showing ability to define, formulate and plan the solution of the problems. Adequate command of language and presentation skills.	Little evidence of showing ability to define, formulate and plan the solution of the problems. Inadequate command of language and little presentation skills.	Unable to define, formulate and plan the solution of the problems. Poor use of language and presentation skills.
Progress	Ability to execute, control and manage the project	Strong evidence of showing ability to plan, execute, manage, control and report on the project; excellent initiative and ability to think and work independently.	Evidence of showing ability to plan, execute, manage, control and report on the project; good initiative and ability to think and work independently.	Some evidence of showing ability to plan, execute, manage, control and report on the project; sufficient initiative and ability to think and work independently.	Little evidence of showing ability to plan, execute, manage, control and report on the project; marginal initiative and ability to think and work independently.	Unable to plan, execute, manage, control and report on the project; little or no initiative and ability to think and work independently.
Oral Presentation/ Project Report	Effective oral presentation skills; and well-prepared project report.	Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base and excellent presentation skills; highly effective use of sentence structure, and a high degree of creativity demonstrated.	Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; good use of language overall; coherent piece of writing.	Some evidence of grasp of subject; little evidence of critical capacity and analytic ability; reasonable understanding of issues and adequate command of the language and presentation skills.	Sufficient familiarity with the subject matter to enable the student to progress without repeating the project; few presentation skills and inadequate command of the language.	Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited or irrelevant use of literature; poor presentation skills; poor use of the language.

Part III Other Information

1. Keyword Syllabus

Students are required to conduct an individual piece of work which uses the quantitative analysis methods learned in the programme. The department will appoint a Project Coordinator to coordinate the projects and assign supervisors/ moderators. A Project Supervisor will be appointed for each project. The duties of supervisors are to:

- provide supervision to the assigned project students,
- liaise with outside organization(s) if necessary, depending on the nature of the project,
- monitor the progress of the project student, and
- assess the presentation and project report conducted by the project student.

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

1.	Kuehl, R O, Statistical Principles of Research Design and Analysis, Duxbury Press.
2.	Sekaran, U., Research Methods for Business, Wiley.
3.	Tichy, H J, Effective Writing for Engineers, Managers, Scientists,Wily.
4.	Turabian, K L., A Manual for Writers of Term Papers, Theses and Dissertations, University of Chicago Press.

Depending on the topics of the project, supervisors will select readings from books, journals and magazines for project students.