City University of Hong Kong
Course Syllabus

offered by
Department of Biomedical Engineering /
Department of Mechanical Engineering
with effect from Semester A 2018 / 19

Part I Course Overview

Course Title:	Industrial Case Study
Course Code:	MBE6045
Course Duration:	1 semester
Credit Units:	3 credits
Level:	P6
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites : *(Course Code and Title)*	Nil (Special approval by the MBE6045 Course Examiner is required)
Precursors: *(Course Code and Title)*	Nil
Equivalent Courses: *(Course Code and Title)*	MEEM6045/SEEM6045 Industrial Case Study
Exclusive Courses: *(Course Code and Title)*	Nil

Part II Course Details

1. Abstract

The course aims to expose students to mainstream research and/or investigation methods for tackling practical engineering or engineering management problems in the real-life environment and developing feasible solutions for these specific problems.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	**Define** the problem(s) and **conduct analysis** of causes		✓	✓	
2.	**Distinguish** various research methodologies and **select** the appropriate method(s) for the problem(s) at hand		✓	✓	
3.	**Define** the scope of project work and **Formulate** project proposal			✓	✓
4.	**Implement** the proposal within a specific time span and **report** project outcomes and **evaluate** project success			✓	✓
5.	**Communicate** the investigation process and finding, using written, oral and visual media.			✓	✓
		N.A.			

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)

(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.					Hours/week (if applicable)
		1	2	3	4	5	
Student centred learning activities:	There are no formal class activities such as regular lectures or tutorials. Consultation sessions with academic supervisors will be scheduled based on each student's individual progress.	✓	✓	✓	✓	✓	13 week (one Semester)
No. 1	Students visit the company sponsoring the project and discuss with industrial advisor(s) to learn about the problem and its context. Library research should be conducted simultaneously to identify similar problems and their solutions.	✓	✓	✓			
No. 2	Students will identify relevant methodologies for solving the problems and list the merits of each of them. Students report to academic supervisor and industrial advisor and justify their choice.	✓	✓	✓			
No. 3	Students will start an industrial attachment at the industrial advisor's company (i.e., sponsor) and implement their proposal.	✓	✓	✓	✓	✓	
No. 4	Students will prepare a written report which summarizes their findings and conduct an oral presentation at the end of the industrial attachment.	✓	✓	✓	✓	✓	

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.					Weighting	Remarks
	1	2	3	4	5		
Continuous Assessment: 100%							
Proposal: 1. Define the problem(s) and conduct analysis of causes 2. Distinguish various research methodologies and select the appropriate method(s) for the problem(s) at hand *3.* Define the scope and the aims of project work	✓	✓	✓		✓	*25%*	
Final report: Document the investigation process, the analysis, the results and conclude the findings	✓	✓	✓	✓	✓	*60%*	
Presentation: Use visual media to give an oral presentation of the study.					✓	*15%*	
** The weighting should add up to 100%.*						*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	The ability of formulating a feasible proposal					
Final report	The ability of reporting the entire investigation, discussing the findings and drawing the conclusions					
Presentation	The effectiveness of communicating the investigation process, results, findings and handling questions using oral and visual media					

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

(An indication of the key topics of the course.)

N.A.

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.)

There are no textbooks for this course. Reading assignments will be provided by the academic supervisor and the industrial supervisor of each project.

2.2 Additional Readings

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

N.A.