

City University of Hong Kong
Course Syllabus

offered by Department of Systems Engineering
with effect from Semester A 2024 / 25

Part I Course Overview

Course Title:	<u>Managing Strategic Quality</u>
Course Code:	<u>SYE6037</u>
Course Duration:	<u>One Semester</u>
Credit Units:	<u>3</u>
Level:	<u>P6</u>
Medium of Instruction:	<u>English</u>
Medium of Assessment:	<u>English</u>
Prerequisites: <i>(Course Code and Title)</i>	<u>Nil</u>
Precursors: <i>(Course Code and Title)</i>	<u>Nil</u>
Equivalent Courses: <i>(Course Code and Title)</i>	<u>SEEM6037 Managing Strategic Quality (offered until 2021/22)</u> <u>ADSE6037 Managing Strategic Quality (offered until 2023/24)</u>
Exclusive Courses: <i>(Course Code and Title)</i>	<u>Nil</u>

Part II Course Details

1. Abstract

This course aims to provide a broad understanding of the principles and practice of modern quality management strategies, and to develop the students' ability to integrate and apply the knowledge in the formulating, planning, implementing, and evaluating Total Quality Management (TQM) programs in order to enhance organisation-wide competitiveness.

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 various dimensions of quality in product and service delivery systems, with emphasis in customer orientation.	15%	✓	✓	
2.	Outline the evolution and principles of modern quality management theories and practices	20%		✓	
3.	Apply the concepts and principles of quality systems in developing organization wide quality management systems.	25%		✓	✓
4.	Integrate and apply key elements of Total Quality Management (TQM): strategic quality management, leadership, customer focus and satisfaction, supplier partnership, employee involvement, performance measures, etc. in developing organization wide quality improvement programs.	30%	✓	✓	✓
5.	Describe the framework and associated strategic and operation issues of implementing TQM based quality improvement systems in the organizations.	10%	✓	✓	
		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 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.

3. Learning and Teaching Activities (LTAs)

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

LTA	Brief Description	CILO No.					Hours/week (if applicable)
		1	2	3	4	5	
Large Class Activities (lectures)	Introduction and Explanation of concepts, theory and practice through examples	✓	✓	✓	✓	✓	26 hours/ sem
Case Studies/ Presentation (tutorials)	Further learning the theory and practice from case studies and solving problems in team work basis	✓	✓	✓	✓		13 hours/ sem
Consultation	Discussions of Course Materials	✓	✓	✓	✓	✓	13 hours/ sem

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: <u>50</u> %							
Individual Assignments, class exercises or Quiz(s)		✓	✓	✓	✓	30%	
Group-based literature review/ case study, report and presentation	✓	✓	✓	✓		20%	
Examination: <u>50</u> % (duration: 2 hours, if applicable)							
Examination	✓	✓	✓	✓		50%	
						100%	

For a student to pass the course, at least 30% of the maximum mark for the examination should be obtained.

Individual assignment:

Each student is required to submit a paper stating one of the current quality problems or potential quality improvement areas in their companies (For full-time students, it can be a literature-review based individual paper on a self-proposed topic in the scope of quality management). The background, causes, and needs and justifications for taking improvement actions must be well described in the paper. Improvement actions should then be proposed with supports of literatures and case studies (personal and subjective judgement without sufficient objective evidence and proven supports are not acceptable; full list of all supporting literature and references is required). In addition, the individual performance in various class exercises and case studies will be taken into account.

Quiz

40-45 minutes short quiz(s) will be used to assess students' understanding of the contemporary

quality concepts and techniques of quality management taught in the lectures.

Learner-centred group-based work on a quality management related topic:

Students are required to form a group, not more than 4 members, and then select one topic in the scope of quality management for this group-based literature-review project (only one group for one topic in each tutorial class). For each project, it is required to thoroughly search the recent literature on the chosen topic. The project must be finished by giving a 30-min presentation, including a 10-min Q&A session, in the period of Week 10 to 12, as well as the submission of the finalized presentation material and a write-up of min. 10 pages by Week 13.

Examples of topics and requirements:

- CRM (Customer Relationship Management) and Quality Management: its basic philosophy, tools and techniques, implementation methods, organizational issues, case studies...
- Data Mining in Customer Satisfaction Management: its basic principles and approaches, tools and techniques, implementation methods, case studies...
- Innovation and Quality Management: the relationship between innovation and quality management in principles and practices and how to develop an integrated innovation and quality management system in an organization, case studies.....
- Integrative Management System, integration of quality assurance system with other management systems, such as environmental management, occupational health and safety, risk management, occupational health, etc.....
- Knowledge Management and Quality Management: its basic ideas, methodologies, scope of implementation of knowledge management in an organization and how it affects the practice of quality management, case studies.....
- Managing Quality in Global Supply Chain: characteristics of global supply chain, outstanding quality issues in supply chain management, supplier policy, selection, evaluation, monitoring....., ways to assure quality in supply chain network, case studies
- New Product Planning and Quality Management: basic concepts and principles in customer-oriented new product planning, procedures of new product ideas generation, development and screening, transforming customer requirements to product specifications and product quality standards, case studies,
- Quality Management Development in Mainland China: industrial development background and characteristics in China....., and past, current and future development of quality management in China, case studies.....
- Quality Tool – FMEA: Failure Mode and effect Analysis, terminology and principles, definition of a failure modes, detectability, severity, and RPN, application examples.....
- Variability Reduction Through DOE and Taguchi Methods: concepts and principles of Design of Experiments and Taguchi Methods, loss function, sources of variability, variability control program, case studies.....

5. Assessment Rubrics

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

Applicable to students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Individual Assignments or Quiz(s)	<p>Submitted solutions to individual assignments/ Quiz(s) with the following criteria:</p> <p>The background, causes, and needs and justifications for taking improvement actions must be well described in the paper. Improvement actions should then be proposed with supports of literatures and case studies. In addition, the individual performance in various class exercises and case studies will be taken into account.</p>	High	Significant	Moderate	Basic	Not even reaching marginal levels
2. Group-based literature review/ case study, report and presentation	<p>Submitted group work and presentations with the following criteria:</p> <p>Thoroughly search the recent literature on the chosen topic, a clear and well-prepared 30-min presentation, submission of the final report with improvement.</p>	High	Significant	Moderate	Basic	Not even reaching marginal levels

3. Examination	<p>Submitted solutions to the final examination with the following criteria:</p> <p>Understanding the concepts and provide practical examples, provide clear and justified problem identification, solution design, implementation plan based on given cases.</p>	High	Significant	Moderate	Basic	Not even reaching marginal levels
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This is a Continuing Education Fund (CEF) Approved Courses, to be eligible for reimbursement; students must achieve the following criteria;

- A minimum attendance rate of 70% (Students should sign on the attendance record for every lesson); and
- Grade C+ or above of the reimbursable course.

Applicable to students admitted from Semester A 2022/23 to Summer Term 2024

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Individual Assignments or Quiz(s)	<p>Submitted solutions to individual assignments/ Quiz(s) with the following criteria:</p> <p>The background, causes, and needs and justifications for taking improvement actions must be well described in the paper. Improvement actions should then be proposed with supports of literatures and case</p>	High	Significant	Moderate/Basic	Not even reaching marginal levels

	studies. In addition, the individual performance in various class exercises and case studies will be taken into account.				
2. Group-based literature review/ case study, report and presentation	Submitted group work and presentations with the following criteria: Thoroughly search the recent literature on the chosen topic, a clear and well-prepared 30-min presentation, submission of the final report with improvement.	High	Significant	Moderate/Basic	Not even reaching marginal levels
3. Examination	Submitted solutions to the final examination with the following criteria: Understanding the concepts and provide practical examples, provide clear and justified problem identification, solution design, implementation plan based on given cases.	High	Significant	Moderate/Basic	Not even reaching marginal levels

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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.)

- Definition and Dimensions of Quality
- Modern Quality Management development and background
- Quality Management Philosophy: Deming/Juran/Crosby/Kaizen
- Organization-wide Quality System: ISO9000.
- Strategic Quality Management and Leadership: Balanced Scorecard, Benchmarking
- Core Concepts of Total Quality Management (TQM): Customer Needs and Satisfaction, Leadership, Supplier Partnership, Employee Involvement
- Six Sigma
- Performance Measurement: Quality Costs, Malcolm Baldrige/ HKMA Quality Awards, Self assessment
- Organization-wide Quality Improvement Implementation Framework

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.)

NIL

2.2 Additional Readings

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

1.	Business performance excellence through total quality management, Jack P. Pekar, West Conshohocken, PA : ASTM International, c2009
2.	"Total Quality Management", by D H Besterfield et al., 3rd edition, Prentice-Hall, Englewood, USA, 2003.
3.	"A TQM Implementation Framework for Hong Kong Manufacturing Industries", by K S Chin and B G Dale, City University of Hong Kong, 2000.
4.	"Juran's Quality Planning and Analysis", F M Gryna, C H Chua and J A DeFeo, 5 th edition, McGraw-Hill, 2007.
5.	"Quality Management: Theory and application", P D Mauch, CRC Press, 2010.
6.	"ISO9001:2008 Explained", C A Cianfrani, J J Tsiakals & J E West, ASQC Press, 2009.
7.	Quality Progress, ASQ monthly publication
8.	Quality Management Journal
9.	International Journal of Quality and Reliability Management
10.	Total Quality Management & Business Excellence (journal)
11.	Managing Service Quality (journal)