

Subject Description Form

Subject Code	ABCT4708
Subject Title	PRINCIPLES OF QUALITY ASSURANCE
Credit Value	3
Level	4
Pre-requisite / Co-requisite/ Exclusion	Introduction to Chemical & Bioprocess Technology (ABCT3747) / Biochemical Techniques (ABCT3113) / equivalent
Objectives	To introduce the concepts and applications of quality assurance as a part of management system, covering all activities in setting up and developing a quality assurance program. Statistical quality control techniques with applications are also presented.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> a. demonstrate a thorough understanding of the fundamental principles of quality assurance and the international standard for quality management systems; b. develop a new or evaluate an existing quality management system; c. integrate methods, skills and tools necessary for quality control applications; d. appreciate the importance of effective teamwork and interpersonal skills; e. communicate effectively in both English and Chinese.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • Introduction and Statistics Review • Statistical Process Control (SPC) • Acceptance Sampling and Inspection • Principles of Quality Management • International Standard for Quality Management System (ISO 9000) • Hong Kong Laboratory Accreditation Scheme (HOKLAS)
Teaching/Learning Methodology	Principles of quality management will be taught in lectures. The ISO 9000 international standard for quality management system (QMS) will be used as an example to demonstrate how the theory is deployed through the practical procedures. Some statistical techniques for quality control and their applications will also be delivered in class. Tutorials will be used to develop students' teamwork and analytical thinking as well as communication and interpersonal skills. Students will work in teams to discuss and present their insights. Assessment will include assignments, quizzes and presentations, as well as an end-of-term written examination.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
			a	b	c	d	e	
	1. Assignment	10	√	√	√			
	2. Presentation	25				√	√	
	3. Test	15	√	√	√			
	4. Examination	50	√	√	√			
	Total	100 %						
	<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Group presentation is used to assess the teamwork and communication, while assignments, test and final exam are used to assess the other outcomes.</p>							
Student Study Effort Required	Class contact:							
	▪ Lecture					33 Hrs.		
	▪ Tutorial					6 Hrs.		
	Other student study effort:							
	▪ Assignment/presentation					20 Hrs.		
	▪ Self-study					48 Hrs.		
	Total student study effort					107 Hrs.		
Reading List and References	Taormina, T.	Implementing ISO 9001:2000: the journey from conformance to performance	Prentice Hall 2002					
	Besterfield, D. H.	Quality Control, 7 th ed.	Prentice Hall 2004					
	ISO 9001:2015 Quality management systems – Requirements							
	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories							