

Subject Description Form

Subject Code	ABCT4651
Subject Title	Environmental, Medicinal, Food and Other Commodities Testing
Credit Value	3
Level	4
Co-requisite	Capstone Project
Objectives	This subject aims at providing students an understanding of the basis for the operation of a testing laboratory, from receipt of test request, handling of test samples, calibration and testing activities to interpretation and reporting of test results; as well as enabling them to be aware of topical societal issues and specific requirements in various testing fields, such as environmental, medicinal, food and other commodities.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> a. recognize the organization and operating system of a testing laboratory in providing quality and reliable test results fit for the intended purpose; b. appreciate regulatory, test specifications and special requirements for provision of testing service and interpretation of test results in various testing fields regarding topical societal issues; c. develop appropriate basic operating system for a test assignment.
Subject Synopsis/ Indicative Syllabus	<p><u>Overview of Laboratory Operation</u></p> <ul style="list-style-type: none"> • Organizational structure and roles; • Laboratory environment and resource management • General operating system and procedures <p><u>Environmental Testing</u></p> <ul style="list-style-type: none"> • Topical issues, regulations and test standards for air, water and waste samples • Sampling and handling of test samples • Ultra-trace analysis, such as dioxins • Case studies <p><u>Medicinal Testing</u></p> <ul style="list-style-type: none"> • Topical issues, regulations and test standards for pharmaceutical products and Chinese medicines; • Case studies <p><u>Food Testing</u></p> <ul style="list-style-type: none"> • Topical issues, regulations and test standards for food additives, contaminants and residues as well as for nutrition labeling • Sampling for test portions • Multi-residues analysis • Case studies <p><u>Other Commodity Testing</u></p> <ul style="list-style-type: none"> • Topical issues, regulations and test standards for other commodities, such as toys and children's products, construction materials, precious metals, etc. • Case studies

Teaching/Learning Methodology	<p>Lectures will provide students with the basis for operating a general testing laboratory. Experience sharing and case study sessions will be conducted by experts in the respective fields and used to illustrate the specific requirements and operation of laboratories in various testing fields regarding topical societal issues. Thereafter students are required to write reflection reports.</p> <p>Tutorials are designed to provide the forum for group discussion and problem based learning on the subject materials.</p> <p>Students will also be required to work on case study projects of solving specific test assignments in teams or individually.</p>																																							
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" data-bbox="536 506 1481 943"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Reflection reports</td> <td>40</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Project report and presentation</td> <td>60</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Reflection reports are used to assess the understanding of general operation and special requirements of testing laboratories while project report and presentation will assess all outcomes.</p>		Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c				1. Reflection reports	40	✓	✓	✓				2. Project report and presentation	60	✓	✓	✓				Total	100 %						
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