

The Hong Kong Polytechnic University

Subject Description Form

Subject Code	ISE5773
Subject Title	Interdisciplinary Research Methods
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	None but some preliminary reading of research methods would be beneficial.
Objectives	<ol style="list-style-type: none"> 1. To deliver a series of high quality, interactive sessions and blended learning activities that will provide students with the means to gain a broad range of graduate level study and research skills necessary to succeed in their chosen field. 2. To provide students with high quality blended learning opportunities to gain a broad knowledge about the process and presentation of research for engineering and business subjects, including awareness to ethical concerns, methods for data collection, techniques for data analysis and design of research proposals.
Intended Learning Outcomes <i>(Note 1)</i>	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Critically evaluate a research problem and draw conclusions from it using literature. b. Communicate critical analysis and evaluation of research effectively. c. Select appropriate research design and methodologies for complex problems providing clear rationale for selected approaches. d. Analyse ethical issues involved in a research design. e. Design a feasible research project to be completed in limited time and resources.
Subject Synopsis/ Indicative Syllabus <i>(Note 2)</i>	<p>This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.</p> <ol style="list-style-type: none"> 1. This module is designed to support student learning and professional needs in the development of study and research skills. The module is designed to provide students with the required high level of knowledge and skills about research methods to enable them to undertake and successfully complete an independent dissertation and original piece of research. 2. In order to achieve this the module also covers key transferrable skills required for research as well as to succeed at postgraduate level such as to complete their post-module assignments. This includes critical thinking, academic writing, and academic integrity (including referencing).

Teaching/Learning Methodology <i>(Note 3)</i>	<p>A combination of lectures and assignment activities are used to deliver interdisciplinary research methods in this subject. This practical and problem-solving approach will develop students’ skills needed to successfully undertake their studies and independent research.</p> <p><u>Alignment between Teaching/Learning Methodologies and ILOs:</u></p> <table><tr><td>Teaching/Learning Methodologies</td><td colspan="6">Intended Subject Learning Outcomes to be assessed</td></tr><tr><td></td><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td><td></td></tr><tr><td>Lecture</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td></tr><tr><td>Assignment Activities</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td></tr></table>								Teaching/Learning Methodologies	Intended Subject Learning Outcomes to be assessed							a	b	c	d	e		Lecture	✓	✓	✓	✓	✓		Assignment Activities	✓	✓	✓	✓	✓																			
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Assessment Methods in Alignment with Intended Learning Outcomes <i>(Note 4)</i>	<table><tr><td rowspan="2">Specific assessment methods/tasks</td><td rowspan="2">% weighting</td><td colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</td></tr><tr><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td><td></td></tr><tr><td>1. Mini Literature Review</td><td>30%</td><td>✓</td><td>✓</td><td>✓</td><td></td><td>✓</td><td></td></tr><tr><td>2. Academic Poster Presentation</td><td>20%</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td></tr><tr><td>3. Research Feasibility Report</td><td>50%</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></table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes (ILO’s):</p> <p>The assignments require students to apply what they have learnt in the subject to their own study environment. These will embrace the ILO’s albeit in different academic assignments and an independent dissertation</p>								Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e		1. Mini Literature Review	30%	✓	✓	✓		✓		2. Academic Poster Presentation	20%	✓	✓	✓	✓	✓		3. Research Feasibility Report	50%	✓	✓	✓	✓	✓		Total	100%						
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Reading List and References	Please see attached reading list and references for details.																																																					

Note 1: Intended Learning Outcomes

Intended learning outcomes should state what students should be able to do or attain upon subject completion. Subject outcomes are expected to contribute to the attainment of the overall programme outcomes.

Note 2: Subject Synopsis/Indicative Syllabus

The syllabus should adequately address the intended learning outcomes. At the same time, overcrowding of the syllabus should be avoided.

Note 3: Teaching/Learning Methodology

This section should include a brief description of the teaching and learning methods to be employed to facilitate learning, and a justification of how the methods are aligned with the intended learning outcomes of the subject.

Note 4: Assessment Method

This section should include the assessment method(s) to be used and its relative weighting, and indicate which of the subject intended learning outcomes that each method is intended to assess. It should also provide a brief explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes.