

## Subject Description Form

<b>Subject Code</b>	COMP 2222
<b>Subject Title</b>	Introduction to Human-Computer Interaction Methods
<b>Credit Value</b>	3
<b>Level</b>	2
<b>Pre-requisite/ Co-requisite/ Exclusion</b>	Nil
<b>Objectives</b>	<p>The objectives of this subject are:</p> <ol style="list-style-type: none"> <li>1. To provide students with a broad view of both theoretical and practical issues in human factors for design of human-computer interfaces.</li> <li>2. To equip students with knowledge and understanding of the nature of human computer interactions, human characteristics, computer system and interface architecture.</li> <li>3. To equip students with sound skills in design and evaluation of user interfaces.</li> </ol>
<b>Intended Learning Outcomes</b>	<p>Upon completion of the subject, students will be able to:</p> <p><u>Professional/academic knowledge and skills</u></p> <ol style="list-style-type: none"> <li>(a) Understand and appreciate the human factors and the theoretical issues involved in human-computer interaction design;</li> <li>(b) Apply the theoretical design principles to the design and evaluation of user interfaces;</li> <li>(c) Collect user requirements, design a human-computer interface according to these requirements, and evaluate the design;</li> </ol> <p><u>Attributes for all-roundedness</u></p> <ol style="list-style-type: none"> <li>(d) Solve problems by using systematic approaches;</li> <li>(e) Solve complex problems in groups;</li> <li>(f) Write technical reports and present the findings.</li> </ol>
<b>Subject Synopsis/ Indicative Syllabus</b>	<ol style="list-style-type: none"> <li>1. Nature of Human Computer Interaction (HCI). Definitions and importance of HCI; historical context of HCI; roles various disciplines play within HCI.</li> <li>2. Evaluation. Role of evaluation; evaluation techniques; experiments and benchmarking.</li> <li>3. Human Characteristics. Perception and representation; models and limits of human memory; mental models; use of metaphors; support user aspects of language, social and organizational aspects; input and output devices: performance characteristics (human and system); speech input and output.</li> </ol>

	<ol style="list-style-type: none"> <li>4. Dialogue interactions and formal models. Task analysis and predictive modeling; dialogue interaction: types and techniques; multimedia and non-graphical dialogues; response time; statistical models for describing interaction processes.</li> <li>5. Design guidelines and metrics. User-centered design and task analysis; software engineering design models; structural HCI design and envisioning design; standards and metrics; guidelines to support design; standards and metrics; documentation and on-line information.</li> <li>6. Design of applications. Design rationale; participatory design; user interface management systems; WWW application design.</li> </ol>
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<p><b>Teaching/Learning Methodology</b></p>	<p><i>Lectures</i>  During the lectures, students will come across the common concepts, methods, and issues in HCI, and will be supplemented by mini-cases and in-class exercises. Students are required to actively participate in the case discussion and the Q&amp;A exercises.</p> <p>During the tutorials, students will have the opportunity to practice, apply, and present what they have learned. They will also be able to share their ideas and experience, as well as learn from each other.</p> <p>Students will learn not only in the class but also through various coursework activities.</p>
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<p><b>Assessment Methods in Alignment with Intended Learning Outcomes</b></p>	<table border="1" data-bbox="591 1220 1386 1482"> <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</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th>f</th> </tr> </thead> <tbody> <tr> <td>Continuous Assessment</td> <td>60%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Final Examination</td> <td>40%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> </tbody> </table> <p><u>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</u>  The course will be assessed by assignments, projects, and tests. Assignments are designed to reinforce the concepts and methods learned in the class. Projects are used to develop students’ analytic and problem solving skills. The written part of the assignments and projects helps student develop their organization and documentation skills. The oral part of the coursework allows students to present their ideas and communicate effectively to the audience. Tests are used to</p>	Specific Assessment Methods/Tasks	% weighting	Intended subject learning outcomes to be assessed						a	b	c	d	e	f	Continuous Assessment	60%	✓	✓	✓	✓	✓	✓	Final Examination	40%	✓	✓	✓	✓		
Specific Assessment Methods/Tasks	% weighting			Intended subject learning outcomes to be assessed																											
		a	b	c	d	e	f																								
Continuous Assessment	60%	✓	✓	✓	✓	✓	✓																								
Final Examination	40%	✓	✓	✓	✓																										

	assess independent problem solving and critical thinking skills.	
<b>Student study effort expected</b>	Class Contact:	
	Lecture	26 hours
	Tutorial/Lab	13 hours
	Other student study effort:	
	Assignments, Coursework, Reading, Exams	66 hours
	Total student study effort	105 hours
<b>Reading list and references</b>	Textbook: B. Shneiderman and C. Plaisant, Designing the User Interface: Strategies for Effective Human-Computer Interaction, 5th Edition, Addison Wesley, 2010. Reference Books: 1. Dix, J. Finlay, G. Abowd, and R. Beale, Human-Computer Interaction, 3rd Edition, Prentice Hall, 2004. 2. P.K. Andleigh and K. Thakrar, Multimedia Systems Design, Prentice Hall, 1996. 3. M.E.S. Morris and R.J. Hinrichs, Web Page Design: A Different Multimedia, Prentice Hall, 1996.	