

1.	Name of Course/Module	Human Computer Interaction
2.	Course Code	THI3461
3.	Status of Subject	Major for B.IT Artificial Intelligence
4.	MQF Level/Stage	Bachelor Degree – MQF Level 6
5.	Version (state the date of the last Senate approval)	June 2012
6.	Requirement for Registration	TCP1241 Computer Programming II
7.	Name(s) of academic/teaching staff	Ong Thian Song Ong Lee Yeng Liew Tze Hui
8.	Semester and Year offered	Trimester 2 (Delta Level)
9.	Objective of the course/module in the programme :	
	To introduce students the concept of Human Computer Interaction, interaction design methodology, proper design of an interface, systematic methodologies for evaluating them and advanced issues in HCI.	
10.	Learning Outcomes :	
	At the completion of the subject, students should be able to:	
	LO1: Comprehend the concepts of human-computer Interaction. (Cognitive, Level 2)	
	LO2: Explain the process of interaction design. (Cognitive, Level 2)	
	LO3: Apply the human-computer interaction concepts. (Cognitive, Level 3)	
	LO4: Describe and use appropriate methods of evaluating an interactive system. (Cognitive and Psychomotor, Level 6)	
11.	Synopsis:	
	The course highlights human-computer interaction strategies from a number of perspectives including that of the engineer, cognitive psychologist, and end-user. Major themes include user centered design and evaluation of usable interfaces, matching computer systems with the cognitive capabilities of users, and an investigation of novel paradigms in human-computer interaction. The course will also focus on the lifecycle of interaction design methodology. Advanced HCI issues will also be introduced in this course.	
	Kursus ini memperkenalkan strategi interaksi manusia-komputer dari beberapa perspektif termasuk jurutera, psikologi kognitif dan pengguna akhir. Tema utama termasuk rekabentuk berasaskan pengguna, rekabentuk dan penilaian antara-muka, menyesuaikan sistem komputer dengan tahap kognitif pengguna dan peninjauan pelbagai paradigma dalam interaksi manusia-komputer. Kursus ini juga bertumpu pada kitar hayat rekabentuk interaksi. Isu semasa interaksi manusia-komputer juga akan dibincangkan dalam kursus ini.	
12.	Mapping of Subject to Programme Outcomes :	
	Programme Outcomes	% of Contribution
	PO1: Apply soft skills in work and career related activities	40.00

	PO7: Demonstrate knowledge and understanding of essential facts, concepts, principles, and theories relating to artificial intelligence	40.00
	PO8: Apply principles and knowledge of artificial intelligence in relevant areas	20.00
13.	Assessment Methods and Types :	
	Method and Type	Description/Details
	Percentage	
	Final Exam	Written Exam
	50.00%	
	Test	Written Exam
	15.00%	
	Assignments	Report and Presentation
	15.00%	
	Quiz	Written Exam
	20.00%	
14.	Details of Subject	
	Topics	Mode of Delivery
		Lecture
		Tutorial
	1. Introduction to interaction design Introduction, good and poor design, interaction design, goals of interaction design and usability principles.	2
		1
	2. Understanding and conceptualizing interaction Problem space, conceptual model, interface metaphors, interaction paradigms.	2
		1
	3. Understanding users and effects of interface to users. Cognition process, framework for cognition, mental model, information processing, psychology aspects of the user, affective aspects, expressive interface, user frustration, virtual characters (agents).	4
		2
	4. Process of interaction design Interaction design activities and process, identify user needs and requirements, alternative design, lifecycle models for interactive design and HCI, task description and analysis, interaction methods (menu, command, voice, graphical etc) prototyping based on user centered approaches to interaction design (ethnography in design, participatory design), evaluation framework, paradigm and techniques, testing and modeling users (user testing, experiments, predictive models).	8
		4
	5. Designing for collaboration and communication. Social mechanism in communication and collaboration, CSCW (email, bulletin board, video conferences, virtual collaborative environment), groupware (time/space matrix, shared applications, synchronous and asynchronous groupware), designing collaborative technologies.	4
		2
	6. Advanced issues in HCI Multi-modal interaction, speech and gesture interaction, assistive technology, interaction in the virtual world, biometrics in HCI, ubiquitous computing and HCI, intelligent user interface, information retrievals, hypertext and digital libraries (natural language, information retrieval algorithms, information interface, hypertext, digital libraries).	8
		4
	Total	28
		14
15.	Tutorials	

	<ul style="list-style-type: none"> • Understanding interaction design • Understanding users and effects of interface to users • Understanding process of interaction design • Designing for collaboration and communication 		
16.	Total Student Learning Time (SLT)	Face to Face (Hour)	Total Guided and Independent Learning
	Lecture	28	28
	Tutorials	14	14
	Laboratory/Practical		
	Presentation		
	Assignment	-	10
	Mid Term Test	1	5
	Final Exam	2	20
	Quizzes	3 times	3
	Sub Total	45	80
	Total SLT	125/40 = 3.1 => 3	
17.	Credit Value	3	
18.	Reading Materials :		
	Textbook	Reference Materials	
	1. Jennifer Preece, Yvonne Rogers, and Helen Sharp, Interaction Design: Beyond Human-Computer Interaction, 2nd edition, John Wiley, 2006.	1. Ben Schneiderman, Designing the User Interface: Strategies for Effective Human-Computer Interaction, 4 th Edition, Addison Wesley, 2004. 2. Alan Dix, Janet Finlay, Gregory Abowd, and Russel Beale, Human-Computer Interaction, 3 rd Edition, Prentice Hall, 2004. 3. Jenny Preece, Human-Computer Interaction, Addison Wesley, 1994. 4. John M. Carroll, Human-Computer Interaction in the new millennium, Addison Wesley, 2001.	
2.	Appendix (to be compiled when submitting the complete syllabus for the programme) : <ol style="list-style-type: none"> 1. Mission and Vision of the University and Faculty 2. Mapping of Programme Objectives to Vision and Mission of Faculty and University 3. Mapping of Programme Outcome to Programme Objectives 4. Programme Objective and Outcomes (Measurement and Descriptions) 		