

 <div style="text-align: center;"> Teaching Plan FAKULTI TEKNOLOGI MAKLUMAT DAN KOMUNIKASI UNIVERSITI TEKNIKAL MALAYSIA MELAKA </div>		
HUMAN COMPUTER INTERACTION		
BITM 2313	SEMESTER 1	SESSION 2023/2024

BITM 2313 HUMAN COMPUTER INTERACTION (3, 2, 2)

TYPE OF COURSE: K

EDITION: 3

UPDATED: 04-10-2023

1.0 LEARNING OUTCOMES

At the end of the lesson, students should be able to:

- i. Apply the concepts and theories of human computer interaction in the system development. (C3, PLO1)
- ii. Show conceptual thinking in problems solving related to application, website or product design. (P2, PLO3)
- iii. Follow the usability evaluation activities. (A3, PLO7)

2.0 SYNOPSIS

This subject introduces the concept of HCI and its relationship in system development. The topics include the basic understanding of cognitive psychology, user interface design, interaction design, usability and evaluation. Other topics such as user-centered design, task analysis and user support design are also covered. The current issues on accessibility and localization are also discussed at the end of this course.

3.0 PRE-REQUISITE

None

4.0 PRACTICAL

- Discuss and analyze the topics given in a group.
- Design and conduct presentations on control interaction and screen layout.
- Use various tools to design and develop user interface for various applications.
- Apply user centered design and task centered analysis principles in designing user interface.

5.0 REFERENCES

- [1] Jennifer Preece, Yvonne Rogers and Helen Sharp, *Interaction Design: beyond human-computer interaction*, (5th Edition), John Wiley & Sons, 2019.
- [2] Ben Schneiderman and Catherine Plaisant, *Designing the User Interfaces: Strategies for Effective Human-Computer Interaction*, (6th Edition), Pearson, 2017.
- [3] Julie A.Jacko, *The Human–Computer Interaction Handbook: Fundamentals, Evolving Technologies, and Emerging Applications* (3rd Edition), CRC Press, 2013.
- [4] Myoungsoon Jeon, *Emotions and Affect in Human Factors and Human-Computer Interaction*, Elsevier, 2017.
- [5] Ben Shneiderman, Catherine Plaisant, Maxine Cohen, Steven Jacobs, Niklas Elmqvist, Nicholas Diakopoulos, *Designing the User Interface: Strategies for Effective Human-Computer Interaction* (6th Edition), Pearson Education, 2016.
- [6] Don Norman, *The Design of Everyday Things: Revised and Expanded Edition*, Basic Books, 2013.

6.0 COURSE IMPLEMENTATION

- i. Lecture
 - 2 hours per week for 14 weeks (Total = 28 hours)
- ii. Laboratory Activities
 - 2 hours per week for 14 weeks (Total = 28 hours)

7.0 COURSE EVALUATION

Assessment Method	LO 1	LO 2	LO 3	Rubric
Assignment (1) = 10%		A1(10%)		Individual work
Assignment (2) = 10%		A2 (10%)		Group work
PBL = 15%			PBL (15%)	Case study & Presentation
Mid Term = 15%	MT1(15%)			Exam
Project = 20%		P1 (20%)		Project
Final Exam = 30%	FE1 (15%)	FE2 (15%)		Exam
Total	30%	55%	15%	

8.0 STUDENT LEARNING TIME (SLT)

SESSION	TYPE	LEARNING ACTIVITIES	(a) Time (Hours)	(b) Frequencies	Total (a) x (b)
FACE TO FACE LEARNING	LCL	LECTURE	2	14	28
	SCL	TUTORIAL	2	0	0
	SCL	LABORATORY PRACTISE	2	14	28
	SCL	ASSIGNMENT	2	3	6
	SCL	PROJECT	2	1	2
	SCL	PROBLEM BASED LEARNING	2	1	2
	SCL	OTHERS	2	0	0
INDEPENDENT LEARNING	SDL	ASSIGNMENT	2	3	6
	SDL	PROJECT	4	1	4
	SDL	PROBLEM BASED LEARNING	0	0	0
	SDL	FINAL EXAMINATION	2.5	1	2.5
	SDL	TESTS (MID TERM)	1.5	1	1.5
	SDL	ASSESSMENT REVISION			16
	SDL	CLASS PREPARATION			28

Total Face to Face Learning (FFL)

66

Total Independent Learning (IL)

58

Total SLT (FFL+IL)

124

Total Equivalent Credit Hours
(TOTAL SLT/40)

3.1

8.0 DETAILED SYLLABUS AND TEACHING PLAN

Week	Session	Contents	References	Delivery Method
1 9-13/11/23	Lec 1	INTRODUCTION TO HUMAN-COMPUTER INTERACTION (HCI) <ul style="list-style-type: none"> Design Issues Interaction Design relationships with HCI User Experiences 	[1,2,3]	Lecture
	Lab 1	DESIGN ISSUES <ul style="list-style-type: none"> Usability goals User experience goals 		Lab
2 6-20/11/23	Lec 2	WHAT IS INTERACTION DESIGN? <ul style="list-style-type: none"> HCI components Definition of Interaction Design Design and Usability Principles 	[1,2]	Lecture
	Lab 2	THE GOAL OF INTERACTION DESIGN <ul style="list-style-type: none"> Design Principles 		Lab
3 23-27/11/23	Lec 3	UNDERSTANDING & CONCEPTUALIZING INTERACTION <ul style="list-style-type: none"> Conceptual Models Interface Metaphors Interaction Paradigms 	[1,2]	Lecture
	Lab 3	CONCEPTUAL MODELS TO PHYSICAL DESIGN <ul style="list-style-type: none"> Wearable screen design 		Lab
4 30/10-3/11/23	Lec 4	UNDERSTANDING USERS PART 1 <ul style="list-style-type: none"> Cognition Mental Model 	[1,2,3]	Lecture
	Lab 4	TRANSFORMING THEORY TO PRACTICE (PART 1) <ul style="list-style-type: none"> Adaptation of multi-platform application 		Assignment 1 Lab

11 11-15/12/23	Lec 9	IDENTIFYING NEEDS & ESTABLISHING REQUIREMENTS (PART 1) <ul style="list-style-type: none"> • Data gathering techniques <ul style="list-style-type: none"> ↻ Interviews ↻ Questionnaires ↻ Observations ↻ Ethnography 	[1,2,3]	Lecture
	Lab 9	APPLYING DATA GATHERING TECHNIQUES <ul style="list-style-type: none"> • Data gathering tools 		Assignment 2 Lab
12 18-22/12/23	Lec 10	IDENTIFYING NEEDS & ESTABLISHING REQUIREMENTS (PART 2) <ul style="list-style-type: none"> • Data presentation and interpretation <ul style="list-style-type: none"> ↻ Quantitative ↻ Qualitative 	[1,2]	Lecture
	Lab 10	APPLYING DATA GATHERING TECHNIQUES <ul style="list-style-type: none"> • Observing and interacting with users 		Lab
13 25-29/12/23	Lec 11	DESIGN, PROTOTYPING & CONSTRUCTION <ul style="list-style-type: none"> • Prototyping techniques • Prototyping to support design • Software prototyping tools 	[1,2,3]	Lecture
	Lab 11	PROBLEM BASED-LEARNING ACTIVITY		PBL
14 1-5/1/24	Lec 12	EVALUATION PART 1 <ul style="list-style-type: none"> • Evaluation Methods • Usability Testing • Experimental Design 		Lecture
	Lab 12	PROBLEM BASED-LEARNING ACTIVITY		PBL
15 8-12/1/24	Lec 13	EVALUATION PART 2 <ul style="list-style-type: none"> • Inspection • Analytic • Models 	[1,2,3]	Lecture

	Lab 13	CONDUCTING HEURISTIC EVALUATION <ul style="list-style-type: none"> • Heuristic Guideline 		Lab
15 19/1/24		PRESENTATION		

10.0 MATRIX OF LEARNING OUTCOMES

SUBJECT vs PROGRAM OUTCOME (PO)

Subject	PROGRAM OUTCOME (PO)								
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
BITM 2313	X	X							X

LEARNING OUTCOME (LO) vs PROGRAM OUTCOME (PO)

LO	PROGRAM OUTCOME (PO)								
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
LO1	X								
LO2		X							
LO3									X

LEARNING OUTCOME (LO)

LO1	Apply the concepts and theories of human computer interaction in the system development. (C3)
LO2	Show conceptual thinking in problems solving related to application, website or product design. (P2, CTPS3)
LO3	Follow to the usability evaluation activities. (A3, LL2)

SUBJECT vs SOFT SKILLS

Subject	SOFT SKILLS																								
	communication skill					critical thinking & problem solving					team work			lifelong learning			entrepreneurship skills			ethics&moral professionalism			leadership skills		
	CS1	CS2	CS3	CS4	CS5	CTP S1	CTP S2	CTP S3	CTP S4	CTP S5	TS1	TS2	TS3	LL1	LL2	LL3	ES1	ES2	ES3	EM1	EM2	EM3	LS1	LS2	LS3
BITM 2313								X							X										

LEARNING OUTCOME (LO) vs SOFT SKILLS

LO	SOFT SKILLS																								
	communication skill					critical thinking & problem solving					team work			lifelong learning			entrepreneurship skills			ethics & moral professionalism			leadership skills		
	CS1	CS2	CS3	CS4	CS5	CTP S1	CTP S2	CTP S3	CTP S4	CTP S5	TS1	TS2	TS3	LL1	LL2	LL3	ES1	ES2	ES3	EM1	EM2	EM3	LS1	LS2	LS3
LO1															X										
LO2								X																	
LO3																									

SUBJECT vs TAXONOMY

Subject	Taxonomy																	
	Affective					Cognitive						Psychomotor						
	A1	A2	A3	A4	A5	C1	C2	C3	C4	C5	C6	P1	P2	P3	P4	P5	P6	P7
BITM 2313	X	X	X			X	X	X				X	X					

LEARNING OUTCOME (LO) vs TAXONOMY

LO	Taxonomy																	
	Affective					Cognitive						Psychomotor						
	A1	A2	A3	A4	A5	C1	C2	C3	C4	C5	C6	P1	P2	P3	P4	P5	P6	P7
LO1						X	X	X										
LO2												X	X					
LO3	X	X	X															

TEACHING PLAN APPROVAL

Prepared by;

Approved by;

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Name: SYARIFFANOR BINTI HISHAM

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Dean/Deputy Dean (Academic)/HOD

Stamp:

Stamp:

Date: 16 MAC 2023

Date: _____

TEACHING PLAN IMPLEMENTATION (MID SEMESTER BREAK)

Comment :

Checked by;

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Dean/Deputy Dean (Academic)/HOD

Stamp :

Date: 30 MARCH 2020

TEACHING PLAN IMPLEMENTATION (WEEK 16)

Comment :

Checked by;

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Dean/Deputy Dean (Academic)/HOD

Stamp :

Date: 28 MAY 2020