



Course Specification

— (Bachelor)

Course Title: Human Computer Interaction

Course Code: IT334

Program: BS IT

Department: Information Technology

College: College of Computer and Information Sciences

Institution: Majmaah University

Version: *Course Specification Version Number*

Last Revision Date: 15 October 2023



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A. General information about the course:

1. Course Identification

1. Credit hours: 3 (3,0,1)

2. Course type

A. University College Department Track Others

B. Required Elective

3. Level/year at which this course is offered: (Level 5)

4. Course general Description:

This course helps to build competence, knowledge, and skills in the field of Human-Computer Interaction Design. The course covers the following topics: Introduction to Human-Computer Interaction (HCI) and Human Cognitive Systems; Understanding Users; Interaction Frameworks, Paradigm and Styles; Evaluation of User Interfaces using Heuristic Evaluation and Usability Testing. The course covers also the underlying Design Principles and Designing Interaction including: Interaction Design Process, User-Centered Design and Prototyping, Conceptual and Physical Design, Interface Design Standards, Task Analysis and Discovery, Design Principles. Different Features of Interaction and User Interfaces will also be presented: Color, Interface Components (e.g. Windows, Icons, Menus, and Pointers etc.), Icons, Text, Speech, Touch, Augmented Reality, and Haptic. Students participate in group projects on the design, development and evaluation of user interfaces.

5. Pre-requirements for this course (if any): CS 210 /IT 210

6. Pre-requirements for this course (if any):

7. Course Main Objective(s):

To make the students to

1. Analyze HCI problem and identify the right solution.
2. Identify HCI principles and guidelines.
3. Design and build a computer based system using prototype and GUI applying HCI



principles.

4. Evaluate computer-based system, design and create effective user interface using available theories and HCI principles.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	60	100
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> • Traditional classroom • E-learning 		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	45
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	15
5.	Others (specify)	
Total		60

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Understand the basic theories behind designing Human-computer interaction	CLO1	Classroom Lectures, Group Discussions, Tutorials.	Assignments, tutorials, quizzes, midterm, final exam





Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	systems.			
1.2	Understand psychological principles underlying effective user interfaces.	CLO1	Classroom Lectures, Group Discussions, Tutorials.	Assignments, tutorials, quizzes, midterm, final exam
...				
2.0	Skills			
2.1	Design and create effective user interface using available theories, principles and guidelines.	CLO3	Classroom Lectures, Group Discussions, Tutorials.	Assignment, tutorial, quiz, midterm, final exam, mini project
2.2				
...				
3.0	Values, autonomy, and responsibility			
3.1	Understand the limitations in current HCI paradigms and be aware if new trends in HCI.	CLO 4	Classroom Lectures, Group Discussions, Tutorials.	Assignments, tutorials, quizzes, midterm, final exam
3.2	Perform iterative design and evaluation for the interaction design.	CLO 3	Classroom Lectures, Group Discussions, Tutorials.	Assignments, tutorials, quizzes, midterm, final exam
...				

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to Human-Computer Interaction, Human Cognitive System, Interaction Paradigms,	8
2.	Interaction Framework, Interaction Styles, Presentation	8
3.	Interaction Design Process (Iterative Design, User-Centered Design, Interaction Design Models),	4
4.	Discovery - (Discovery Phase Framework, Collection, Interpretation, Documentation)	4





5.	Design - User-Centered Design and Prototyping, Conceptual and Physical Design, Interface Design Standards	4
6.	Design Principles	4
7.	Usability Testing	4
8.	Colors, Interface Components	4
9.	Icons & selected topics	5
Total		45

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Assignment	Week 2, 4,8	10%
2.	Mid Term	Week 5	20%
3.	Presentations	Week 6,9	10%
4.	Final Exam	Week 11	40%
5.	Practical exam	Week 10	20%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	The Resonant Interface HCI foundations for interaction design by Steven Heim
Supportive References	
Electronic Materials	
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom
Technology equipment (projector, smart board, software)	LCD Projector





Items	Resources
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Faculty	Direct
Effectiveness of Students assessment	Students	Indirect
Quality of learning resources		
The extent to which CLOs have been achieved		
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	IT COUNCIL
REFERENCE NO.	
DATE	

