



Course Specification

(Bachelor)

Course Title: Human Computer Interaction

Course Code: IS1372

Program: Bachelor of Information Systems

Department: Information Systems

College: College of Computer and Information Sciences

Institution: Imam Mohammad Ibn Saud Islamic University

Version: 2

Last Revision Date: 21st July 2025

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A. General information about the course:

1. Course Identification

1. Credit hours: 3 credit hours

2. Course type

A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others
B. ☐ Required ☒ Elective

3. Level/year at which this course is offered: 4th Year

4. Course general Description:

This course introduces the field of Human computer Interaction (HCI). Therefore, the course provides an overview about the fundamental components of an interactive system which includes the human, the computer system itself and the nature of the interaction. It presents also different interaction models, frameworks and styles. Moreover, it includes the interaction design process and highlights the range of design rules that can help to increase the usability of software products. In addition, it includes the evaluation techniques under two broad headings: expert analysis and user participation. Furthermore, it discusses how to design a system to be universally accessible, regardless of age, gender cultural background or ability. The course also explores modern AI-driven interfaces and conversational design, examining how AI technologies are transforming human-computer interaction through adaptive systems, voice interfaces, and intelligent user experiences.

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

IS1220 Introduction to Databases

6. Co-requisites for this course (if any):

No Co-requisites

7. Course Main Objective(s):

Upon completion of this course, students will be able to

- learn the basic physiological, perceptual, and cognitive components of human learning and memory.
- gain theoretical knowledge of and practical experience in the fundamental aspects of designing and implementing user interfaces.
- learn to analyze interaction problems from a technical, cognitive, and functional perspective.
- develop an awareness of the range of general human-computer interaction issues that must be considered when designing information systems.

learn about multimodal displays for conveying and presenting information





2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	3 hours/week	100%
2.	E-learning		
3.	Hybrid - 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	
5.	Others (specify)	
Total		45

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

Code	Course Learning Outcomes	Code of CLOs aligned with PLOs (Performance Level)	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Define the human and computer components functions regarding interaction with computer and human.	K1(I)	Class lectures	Quiz, Midterm, Final
1.2	Demonstrate understanding of design responsibilities and methodological approaches in developing human-computer interaction systems	K2(I)	Class lectures	Midterm, Assignment, Project





Code	Course Learning Outcomes	Code of CLOs aligned with PLOs (Performance Level)	Teaching Strategies	Assessment Methods
1.3	Apply theoretical concepts for analyzing observed problems in intelligent interfaces, models and frameworks from the field of HCI.	K1(I)	Class lectures	Quiz, Midterm, Project, Final
2.0	Skills			
2.1	Describes the interaction design process, and develop an understanding of different types of design rules that support the usability.	S4(P)	Class lectures	Midterm, Assignment, Project, Final
2.2	Select and apply appropriate evaluation techniques in HCI and develop an understanding of universal design.	S2(P)	Class lectures	Project, Assignment, Final
2.3	Design the systems in deep to improve the skill of development of an existing system or a new system related to human computer interaction.	S2(P)	Class lectures	Project, Assignment, Final
3.0	Values, autonomy, and responsibility			
3.1	Function effectively on teams to accomplish a common goal	V1(P)	Class Lectures, Discussions	Project
3.2	Communicate effectively in oral and written form	V3(P)	Class Lectures, Discussions	Project

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction and history of HCI	4
2.	The Human Component Functions.	4





3.	The Computer Component Functions	4
4.	Interaction and Ergonomics	4
5.	Interaction design basics	4
6.	The Process interaction Design	4
7.	Methods for evaluating user interfaces	4
8.	Universal Design	4
9.	Cognitive Models	4
10.	AI-Driven Interfaces and Conversational Design	6
11.	Project discussions	3
Total		45

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz	4,11	10%
2.	Midterm Exam	8	20%
3.	Assignment	6,12	10%
4.	Group Project	15	20%
5.	Final Exam	16	40%

*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	1. Preece, Jennifer, Helen Sharp, and Yvonne Rogers. Interaction design: beyond human-computer interaction. John Wiley & Sons, 2015. 2. Human Computer Interaction, Dix, J. Finlay, G. Abowd, and R. Beale, 3rd edition, Prentice Hall, 2004. ISBN 978-0130461094
Supportive References	N/A
Electronic Materials	N/A
Other Learning Materials	N/A

2. Required Facilities and equipment





Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	1. At least 30 seats 2. A projector connected to a PC preferably with Internet connection 3. Sliding board
Technology equipment (projector, smart board, software)	N/A
Other equipment (depending on the nature of the specialty)	N/A

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect using course evaluation survey
Effectiveness of Students assessment	Faculty members	Direct method using TOS file
Quality of learning resources	Students and Faculty	Indirect using course evaluation survey and faculty survey
The extent to which CLOs have been achieved	Faculty members	Direct method using TOS file
Other		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	IS CURRICULUM APPROVAL & DEVELOPMENT COMMITTEE IS QAC / / IS COUNCIL
REFERENCE NO.	
DATE	

