



## Course Specifications

<b>Course Title:</b>	Human Computer Interaction
<b>Course Code:</b>	353CCS-3
<b>Program:</b>	BSc in Computer Science
<b>Department:</b>	Computer Science
<b>College:</b>	College of Computer Science & Information Systems
<b>Institution:</b>	Najran University

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## A. Course Identification

<b>1. Credit hours:</b>	3 (2, 2, 1) [Theory, Lab, Tutorial]			
<b>2. Course type</b>				
a.	University <input type="checkbox"/>	College <input type="checkbox"/>	Department <input checked="" type="checkbox"/>	Others <input type="checkbox"/>
b.	Required <input checked="" type="checkbox"/>	Elective <input type="checkbox"/>		
<b>3. Level/year at which this course is offered:</b>	Year 3 / Level 9			
<b>4. Pre-requisites for this course (if any):</b>	None			
<b>5. Co-requisites for this course (if any):</b>	None			

### 6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	50	100%
2	Blended		
3	E-learning		
4	Distance learning		
5	Other		

### 7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture (2 contact hours *10 weeks)	20
2	Laboratory/Studio (2 contact hours *10 weeks)	20
3	Tutorial (1 contact hours *10 weeks)	10
4	Others (specify)	
	<b>Total</b>	<b>50</b>

## B. Course Objectives and Learning Outcomes

### 1. Course Description

Study of theoretical concepts of human-computer interaction (HCI), design principles for graphical computer interfaces, dimensions and multi-disciplinary nature of human computer interaction, user interface design, user requirements analysis, user modeling, task analysis, general principles in user interface design, principles, rules and models in human-centered design, design guidelines, standards and style guides, dialogue styles, ergonomics and human factors, usability, toolkits, development environments and user interface management systems, formative and summative evaluation, user interfaces for the web, enhanced human-computer interaction, and advanced issues in human-computer interaction.

### 2. Course Main Objective

**CLO\_1:** Define the theory of basic concepts of human computer interaction that concern human cognition, interfaces and interaction.

**CLO\_2:** Describe basic task analysis (why task analysis is at the heart of nearly all HCI activities, using of task analysis in computing-related) and the rules and models of the human centered design in interactive software applications.

**CLO\_3:** Analyze the general features of the graphical user interface from usability point of view

**CLO\_4:** Design good user interfaces which are applicable to different user types.

**CLO\_5:** Evaluate the environment and user interface management system

**CLO\_6:** Determine the usability problems through the development of a model and graphical user interface and to evaluate using a questionnaire.

**CLO\_7:** Develop the GUI programming techniques to solve windows based applications or real-word problems.

### 3. Course Learning Outcomes

CLOs		Aligned PLOs
<b>1</b>	<b>Knowledge and Understanding</b>	
1.1	Define the theory of basic concepts of human computer interaction that concern human cognition, interfaces and interaction.	K1
1.2	Describe basic task analysis (why task analysis is at the heart of nearly all HCI activities, using of task analysis in computing-related) and the rules and models of the human centered design in interactive software applications.	K1
1.3	Determine the usability problems through the development of a model and graphical user interface and to evaluate using a questionnaire.	K2, K3
1...		
<b>2</b>	<b>Skills :</b>	
2.1	Analyze the general features of the graphical user interface from usability point of view	S <sub>1</sub> , S <sub>4</sub>
2.2	Design good user interfaces which are applicable to different user types.	S <sub>1</sub> , S <sub>2</sub> , S <sub>5</sub>
2.3	Evaluate the environment and user interface management system	S <sub>2</sub>
2.4	Develop the GUI programming techniques to solve windows based applications or rea-word problems.	S <sub>2</sub> , S <sub>5</sub>
<b>3</b>	<b>Values:</b>	
3.1		
3.2		
3.3		
3...		

### C. Course Content

No	List of Topics	Contact Hours
1	Theoretical concepts of human-computer interaction (HCI).	5
2	Task analysis	2
3	Ergonomics and human factors	4
4	Human Centered Design	5
5	General Principles in interface design	2
6	Development environments and user interface management systems, formative and summative evaluation	5
7	Design guidelines, standards and style guides, dialogue styles, and	5
8	Usability: Principles, Evaluation	5

9	Usability Test Process, Web interfaces	5
10	Theoretical concepts of human-computer interaction (HCI).	5
11	Task analysis	2
12	Ergonomics and human factors	5
<b>Total</b>		50

## D. Teaching and Assessment

### 1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
<b>1.0</b>	<b>Knowledge and Understanding</b>		
1.1	Define the theory of basic concepts of human computer interaction that concern human cognition, interfaces and interaction.	Interactive Lectures, Group Discussions	Quiz 1, Mid Exam
1.2	Describe basic task analysis (why task analysis is at the heart of nearly all HCI activities, using of task analysis in computing-related) and the rules and models of the human centered design in interactive software applications.	Interactive Lectures, Group Discussions	Quiz 1, Mid Exam
1.3	Determine the usability problems through the development of a model and graphical user interface and to evaluate using a questionnaire.	Lectures, Lab Demonstrations	Quiz 2, Final Lab Exam, Final Exam
<b>2.0</b>	<b>Skills</b>		
2.1	Analyze the general features of the graphical user interface from usability point of view	Lectures, Lab Demonstrations, Group Discussions	Mid Exam , Final Lab Exam, Final Exam
2.2	Design good user interfaces which are applicable to different user types.	Lectures, Lab Demonstrations	Quiz 2, Final Lab Exam, Final Exam
2.3	Evaluate the environment and user interface management system	Lectures, Lab Demonstrations	Final Lab Exam, Final Exam
2.4	Develop the GUI programming techniques to solve windows based applications or rea-word problems.	Lectures, Group Discussions	Final Exam
<b>3.0</b>	<b>Values</b>		
3.1			
3.2			
...			

### 2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quiz1	3 <sup>rd</sup> week	5%
2	Assignment 1 or mini project (presentation)	5 <sup>th</sup> week	3%
3	Lab Participation	Full Semester	4%
4	Midterm Exam	6 <sup>th</sup> week	20%
5	Mid Lab Exam and Lab Project\Quiz	7 <sup>th</sup> week	10%

#	Assessment task*	Week Due	Percentage of Total Assessment Score
6	Quiz 2	8 <sup>th</sup> week	5%
8	Assignment 2 or mini project (presentation)	10 <sup>th</sup> week	3%
11	Final Lab Exam	11 <sup>th</sup> week	10%
12	Final Exam	12 or 13 <sup>th</sup> Week	40%

\*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

## E. Student Academic Counseling and Support

**Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :**

- 10 weekly office hours + appointments
- 4weekly academic advising hours
- Extra weekly 2 office hours prior to exams.

## F. Learning Resources and Facilities

### 1. Learning Resources

<b>Required Textbooks</b>	<b>Interaction Design Beyond Human Computer Interaction, ALAN DIX, JANET FINLAY, GREGORY D. ABOWD, RUSSELL BEALE; 3<sup>RD</sup> EDITION, PEARSON. PRENTICE HALL</b>
<b>Essential References Materials</b>	<ul style="list-style-type: none"> <li>• <b>Human Computer Interaction</b>, Panayiotis Zaphiris, Chee Siang Ang, Information Science Reference</li> <li>• Diaper, Stanton, <b>The Handbook Of Task Analysis For Human Computer Interaction</b></li> </ul> <p>Martin G. Helander, Thomas K. Landauer, Prasad V. Prabhu, Elsevier <b>Handbook Of Human-Computer Interaction</b> Elsevier</p>
<b>Electronic Materials</b>	<ul style="list-style-type: none"> <li>• Microsoft Visual Studio</li> <li>• Figma</li> </ul>
<b>Other Learning Materials</b>	

### 2. Facilities Required

Item	Resources
<b>Accommodation</b> (Classrooms, laboratories, demonstration rooms/labs, etc.)	<ul style="list-style-type: none"> <li>• Lecture Rooms with appropriate number of seats, Projector with Screen and a white board or a smart board.</li> <li>• All the computers in all the laboratories should be installed with the latest version of the required software.</li> </ul>

Item	Resources
<p><b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)</p>	<ul style="list-style-type: none"> <li>• One PC and one projector and data show in the lecture room</li> <li>• Number of PCs according to strength of students in the lab room</li> </ul>
<p><b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)</p>	<ul style="list-style-type: none"> <li>• Microsoft Visual Studio</li> <li>• Figma</li> </ul>

## G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of Teaching	Students	Online Course Survey
Quality of learning resources	Students	Online Course Survey
Evaluation of Teaching	Peer Reviewer, Course Coordinator	Exam Moderation Process
Verifying Standards of Student Achievement	Faculty, Program Coordinator, Vice Dean and Dean	Answer Scripts Review, Grade Sheet review

**Evaluation areas** (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

**Evaluators** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

**Assessment Methods** (Direct, Indirect)

## H. Specification Approval Data

<b>Council / Committee</b>	Computer Science Departmental Council
<b>Reference No.</b>	14440203-0185-00002
<b>Date</b>	1st Sep, 2022