



# Course Specifications

<b>Course Title:</b>	Human Computer Interaction
<b>Course Code:</b>	ICS 432
<b>Program:</b>	Computer Science and Information
<b>Department:</b>	Computer Science and Information
<b>College:</b>	College of Science at Az Zulfi
<b>Institution:</b>	Majmaah university

## Table of Contents

<b>A. Course Identification</b> .....	<b>3</b>
6. Mode of Instruction (mark all that apply) .....	3
<b>B. Course Objectives and Learning Outcomes</b> .....	<b>4</b>
1. Course Description .....	4
2. Course Main Objective.....	4
3. Course Learning Outcomes .....	4
<b>C. Course Content</b> .....	<b>5</b>
<b>D. Teaching and Assessment</b> .....	<b>5</b>
1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods .....	5
2. Assessment Tasks for Students .....	6
<b>E. Student Academic Counseling and Support</b> .....	<b>6</b>
<b>F. Learning Resources and Facilities</b> .....	<b>7</b>
1. Learning Resources .....	7
2. Facilities Required.....	7
<b>G. Course Quality Evaluation</b> .....	<b>7</b>
<b>H. Specification Approval Data</b> .....	<b>7</b>

## A. Course Identification

<b>1. Credit hours:</b> 3
<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 type="checkbox"/> Elective <input type="checkbox"/>
<b>3. Level/year at which this course is offered:</b> 4 <sup>th</sup> level
<b>4. Pre-requisites for this course (if any):</b> Object Oriented Programming ICS 211
<b>5. Co-requisites for this course (if any):</b> Nil

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

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	48	80%
2	Blended	6	10%
3	E-learning	6	10%
4	Correspondence		
5	Other		

### 7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
<b>Contact Hours</b>		
1	Lecture	30
2	Laboratory/Studio	30
3	Tutorial	
4	Others (specify)	
	<b>Total</b>	60
<b>Other Learning Hours*</b>		
1	Study	
2	Assignments	
3	Library	
4	Projects/Research Essays/Theses	
5	Others (specify)	
	<b>Total</b>	

\* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

## B. Course Objectives and Learning Outcomes

### 1. Course Description

#### HCI Foundations

- Contexts for HCI (anything with a user interface, e.g., webpage, business applications, etc.)
- Processes for user-centered development, e.g., early focus on users, empirical testing, iterative design
- Different measures for evaluation, e.g., utility, efficiency, learnability, user satisfaction

#### Designing Interaction

- Principles of graphical user interfaces (GUIs)
- Elements of visual design (layout, color, fonts, labeling)
- Handling human/system failure
- User interface standards

#### Programming Interactive Systems

- Interaction Design Patterns: visual hierarchy, navigational distance
- Event management and user interaction
- Data-driven applications (database-backed web pages)

#### User-Centered Design & Testing

- Approaches to, and characteristics of, the design process
- Techniques for gathering requirements, e.g., interviews, surveys, ethnographic and contextual enquiry

#### New Interactive Technologies

- Choosing interaction styles and interaction techniques
- Representing information to users: navigation, representation, manipulation
- Approaches to design, implementation and evaluation of non-mouse interaction.

### 2. Course Main Objective

1. Acquire the fundamentals of Human-Computer Interaction.
2. Develop interactive UI evaluation skills.
3. Develop a toolbox of proper design guidelines.
4. Acquire GUI programming skills.
5. Learn a variety of interface evaluation techniques

### 3. Course Learning Outcomes

CLOs		Aligned PLOs
1	<b>Knowledge:</b>	
1.1	explain why it is important to design Interactive products that are usable	.a1
1.2	gain knowledge on the interplay between humans, tasks, technology, and contexts	.a2
1.3	gain knowledge on important human factors that affect human-computer interactions	.a2
1...		
2	<b>Skills :</b>	
2.1	be able to conduct task analysis within contexts	.b1
2.2	be able to apply HCI principles, guidelines, methods, and techniques for human-centered information systems development	.b2

CLOs		Aligned PLOs
2.3		
2...		
<b>3</b>	<b>Competence:</b>	
3.1	be able to conduct HCI evaluations and usability studies	.c1
3.2	be able to critique HCI designs of others	.c3
3.3	Illustrate and use the HCI technologies effectively	.c3
3...		

### C. Course Content

No	List of Topics	Contact Hours
1	Brief history of HCI, What is Interaction Design and Usability?	6
2	UI Design Paradigms	6
3	Human Factors Perspective- The User Profile	6
4	The computer aspect of Human Computer Interaction, design principles	6
5	User interface design Scenario Based Design and Heuristic Evaluation	6
6	Process of interaction design, Design Guidelines for Menus, Fill-in forms, and Commands	6
7	User modeling and the user profile and Adaptive interfaces, Evaluating Usability- web usability	6
8	Evaluating usability, Predictive and interpretive evaluation	3
9		
<b>Total</b>		45

### 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</b>		
1.1	explain why it is important to design Interactive products that are usable	Lectures. Lab	Written Exam Homework
1.2	gain knowledge on the interplay between humans, tasks, technology, and contexts	demonstrations. Case studies.	assignments Lab assignments Class
...	gain knowledge on important human factors that affect human-computer interactions	Individual presentations.	Activities Quizzes
<b>2.0</b>	<b>Skills</b>		
2.1	be able to conduct task analysis within contexts	Lectures. Lab	

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
2.2	. be able to apply HCI principles, guidelines, methods, and techniques for human-centered information systems development	Case studies. Individual presentations. Brainstorming.	Written Exam Homework assignments Lab assignments Class Activities Quizzes
2.3	. be able to conduct HCI evaluations and usability studies		
3.0	<b>Competence</b>		
3.1	Illustrate and use the HCI technologies effectively	Lectures. Lab Case studies. group discussions. Brainstorming. Individual Presentations.	Written Exam Homework assignments Lab assignments Class Activities Quizzes
3.2			
...			

## 2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	First written mid-term exam	6	15%
2	Second written mid-term exam	12	15%
3	Presentation, class activities, and group discussion	Every week	10%
4	Homework assignments	After Every chapter	10%
5	Implementation of presented programs	Every two weeks	10%
6	Final written exam	16	40%
7			
8			

\*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 :  
Office hours - Office call – Email - Mobile:

## F. Learning Resources and Facilities

### 1. Learning Resources

<b>Required Textbooks</b>	<a href="#">David Barnes</a> , Object-Oriented Programming with Java: An Introduction 1st Edition, Prentice Hall, January 28, 2000
<b>Essential References Materials</b>	<b>Poo</b> , Danny C.C., <b>Kiong</b> , Derek B.K, Object-Oriented Programming and Java, Springer, 2008
<b>Electronic Materials</b>	Determines as the course is going on
<b>Other Learning Materials</b>	Video and presentation

### 2. Facilities Required

Item	Resources
<b>Accommodation</b> (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classroom and Lab, as those that are available at college of science at AzZulfi.
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	Smart Board - data show
<b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	A/N

## G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
course evaluation	Student-faculty management meeting	Questionnaires
Evaluation of Teaching	Program/Department Instructor	Discussion within the staff members teaching the course Departmental internal review of the course.

**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>	
<b>Reference No.</b>	
<b>Date</b>	