



Course Specification

Course Name: [Human Computer Interface]
Course Code: [CS453]

I. Basic Course Information

Major or minor element of program: Major
Department offering the course: Computer Science Department

Academic level: 300 Level
Semester in which course is offered: Second (spring) semester
Course pre-requisite(s): CS 251 Software Engineering-1

Credit Hours: 3
Contact Hours Through:

Lecture	Tutorial *	Practical *	Total
2.5	0.0	1.5	4.0

* 1.5 hours for **either** Tutorial or Practical

Approval date of course specification: January 2015

II. Overall Aims of Course

The aim of this module is to introduce the student to the human, physical and informational aspects of the human-computer interface, and the importance of the systematic consideration of such interface to the success of computer-based information systems. It stresses the importance of good interfaces and the relationship of interface design to effective human interaction with computers.

III. Program ILOs covered by course

Program Intended Learning Outcomes (By Code)			
Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
K1,K2,K11,K18	I4,I10,I13	P9,P11,P18	G2,G6



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IV. Intended Learning Outcomes of Course (ILOs)

a. Knowledge and Understanding

On completing the course, students should be able to:

- K.1 Explain the concepts of human computer interfacing.
- K.2 Learn a theoretical knowledge and practical experiences in the fundamental aspects of designing, implementing and evaluating interfaces.
- K.3 Provide the students with the design principles and implementation issues related to human computer interface systems.
- K.4 Describe the principles of Human Computer Interface systems, and give examples to illustrate the concepts of the subject.
- K.5 Design, implement and evaluate effective and usable graphical computer interfaces

b. Intellectual/Cognitive Skills

On completing the course, students should be able to:

- I.1 Analyze the system requirements.
- I.2 Set goals for good interfacing between human and computers.
- I.3 Categorize problems related to human computer interfacing.

c. Practical/Professional Skills

On completing the course, students should be able to:

- P.1 Designing systems that are usable by people.
- P.2 Apply contemporary techniques for implementing interfaces, and have experienced building applications through prototyping tools, window-based systems, and toolkits
- P.3 Practice a variety of simple methods for evaluating the quality of an interface

d. General and Transferable Skills

On completing the course, students should be able to:

- G.1 Enhance team working skills through collaborative projects.
- G.2 Enhance oral communication skills through presentations.
- G.3 Enhance written communication skills through reports writing.

V. Course Matrix Contents

	Main Topics / Chapters	Duration (Weeks)	Course ILOs Covered by Topic (By ILO Code)			
			K & U	I.S.	P.S.	G.S.
1-	Introduction	1	K1,K4			
2-	Understanding users and their tasks	2	K1,K4	All	P1	G1
3-	Designing with the user	2	K2,K3,K5	All	P1,P3	G1,G3
4-	Designing and building visual interfaces	2	K2,K3,K5	I2,I3	P1,P2	G1,G3
5-	Principles for Design	2	K1,K2,K5	I2,I3	All	G1,G3
6-	System Examples	2	K3,K4	All	P1,P2	All
7-	The Past and the Future	2	K1,K2,K3	I3	P1,P2	G3
	Net Teaching Weeks	13				



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VI. Course Weekly Detailed Topics / hours / ILOs

Week No.	Sub-Topics	Total Hours	Contact Hours	
			Theoretical Hours	Practical Hours *
1	Introduction	2.5	2.5	
2	Task-centered system design	4	2.5	1.5
3	High level models of human behaviour	4	2.5	1.5
4	User centered design and Prototyping	4	2.5	1.5
5	Evaluating Interfaces with Users: Qualitative Methods	4	2.5	1.5
6	Psychology of everyday things	4	2.5	1.5
7	Midterm Exam			
8	Beyond screen design	4	2.5	1.5
9	Graphical screen design	4	2.5	1.5
10	Visual Basic examples	4	2.5	1.5
11	Design principles and usability heuristics	4	2.5	1.5
12	History of human computer interaction	4	2.5	1.5
13	Visions of the future	4	2.5	1.5
14	Revision	4	2.5	1.5
15	Final Exam			
Total Teaching Hours		51	33	18

* No Practical/Tutorial during the first week of the semester

VII. Teaching and Learning Methods

Teaching/Learning Method	Selected Method	Course ILOs Covered by Method (By ILO Code)			
		K & U	Intellectual Skills	Professional Skills	General Skills
Lectures & Seminars	✓	All	All		
Tutorials	✓	All	All		
Computer lab Sessions	✓			All	
Practical lab Work	✓			All	
Reading Materials	✓	K1,K2,K3			
Web-site Searches	✓		All		
Research & Reporting					
Problem Solving / Problem-based Learning					
Projects	✓		All	All	All
Independent Work					
Group Work	✓			P1	G1
Case Studies	✓				
Presentations	✓				All
Simulation Analysis					
Others (Specify):					



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VIII. Assessment Methods, Schedule and Grade Distribution

Assessment Method	Selected Method	Course ILOs Covered by Method (By ILO Code)				Assessment Weight / Percentage	Week No.
		K & U	I.S.	P.S.	G.S.		
Midterm Exam	✓	All	All			15%	7
Final Exam	✓	All	All			60%	15
Quizzes	✓	All	All			5%	3,8
Course Work	✓			All		5%	5,9
Report Writing							
Case Study Analysis							
Oral Presentations							
Practical	✓						
Group Project	✓			All	G1,G2	10%	11
Individual Project				All	G2,G3	5%	14
Others (Specify):							

IX. List of References

Essential Text Books	<ul style="list-style-type: none"> Towards the Year 2000 (2nd Edition) Baecker, R., Grudin, J., Buxton, W., and Greenberg, S. (1995), 950 pages, Morgan Kaufmann Publishers Inc, California. ISBN 1-55860-246-1, Dewey Catalog QA76.9.H85R43.
Course notes	<ul style="list-style-type: none"> None
Recommended books	<ul style="list-style-type: none"> Sharp, H., Rogers, Y., Preece, J. (2007) Interaction design: beyond human-computer interaction, 2nd ed., Wiley. ISBN 978-0-470-01866-8 (web site: http://www.id-book.com/) Dix, Alan; Finlay, J.; Abowd, G.; Beale, R. (2004) Human-computer interaction, 3rd Edition, Prentice Hall. ISBN: 0130-461091 Norman, D. (2002) "The Design of Every Day Things", Basic Books. Liddle, David. (1996) Bringing Design to Software, edited by Terry Winograd. New York, NY: ACM Press.
Periodicals, Web sites, etc ...	<ul style="list-style-type: none"> http://homepage.mac.com/bradster/iarchitect/shame.htm http://www.id-book.com/ http://www.useit.com/ http://www.usernomics.com/ http://www.baddesigns.com/



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X. Facilities required for teaching and learning

List the facilities required

- Data show projector
- Overhead projector in the labs
- High speed Internet connectivity
- Microsoft Windows XP
- Microsoft Office Suite
- Microsoft FrontPage
- MS Visual Studio
- Digital camera (available for loan to students)
- Digital camcorder (available for loan to students)
- A digital scanner

Course coordinator: Prof. Hesham Hassan

Head of Department: Prof. Abeer El Korany

Date: January 2015