CPIS-354 Syllabus

Catalog Description

CPIS-354 Principles of Human-Computer Interaction
Credit: 3 (Theory: 3, Lab: 1, Practical: 1)
Prerequisite: CPIS-250
Classification: Department Required

The objective of this course is to provide an introduction to the field of human-computer interaction (HCI), an interdisciplinary field that integrates cognitive psychology, design, computer science and others. Examining the human factors associated with information systems provides the students with knowledge to understand what influences usability and acceptance of IS. Topics include the examination of human performance, components of technology, methods and techniques used in design and evaluation of IS, societal impacts of HCI, user-centered design methods, and the contemporary technologies used in empirical evaluation methods.

Class Schedule

Meet 50 minutes 3 times/week or 80 minutes 2 times/week

Lab/Tutorial 90 minutes 1 times/week

Textbook

Jenny Preece, Helen Sharp, Yvonne Rogers, "Beyond Humancomputer Interaction", Wiley;(2015)

ISBN-13 9783642013096 **ISBN-10** 1119020751

Grade Distribution

Week	Assessment	Grade %
1	Homework Assignments 1	5
6	Exam 1	10
10	Homework Assignments 2	5
11	Exam 2	10
15	Group Project	40
16	Comprehensive Final Exam	30

Last Articulated

December 26, 2017

Relationship to Student Outcomes

a	b	c	d	e	f	g	h	i	j
	x	x				x			

Course Learning Outcomes (CLO)

By completion of the course the students should be able to

1. Explain good and bad designs (Ch. 1) (b)
2. Define and explain Human Computer Interaction and give examples of Human Computer interaction (Ch. 1) (b)
3. Explain Human Common Capabilities and Limitations (Ch. 2). (b)
4. Describe Human input and output channels and the impact on interface design. (Ch. 2). (b)
5. Identify the impact of human memory on interface design. (Ch.2) (c)
6. Distinguish between different types of technologies and devices available today. (Ch. 3) (g)
7. Distinguish between different types of Input and output devices for interactive use. (Ch. 3) (g)
8. Recognize how computers and associated input –output devices influences the nature of interaction and style of the interface (Ch. 4). (g)
9. List the Advantage & Disadvantage of the Different Types of Interaction Styles (Ch. 4). (g)
10. commuicate how the effect of users' previous knowledge and experience on the way they think and perform their tasks (Ch. 7 & Reference Book 10). (g)
11. commuicate the effect of users' age and gender on the nature of interaction and style of the interface (Ch. 7 & Reference Book 10). (g)
12. **Communicate the user's goals and how they should be reached. (b)**
13. Communicate the personal, social, and cultural characteristics the users bring to the tasks (Ch. 7 & Reference Book 10). (b)
14. **Apply different data gathering methods used in designing interactive systems. (Ch. 7 & Reference Book 10). (c)**
15. **Apply design rules to enhance the interactive properties of the system (Ch 7). (c)**
16. **Construct prototypes of interactive systems. (Ch 11). (c)**
17. **Formulate an Evaluation plan for any given interactive systems using Expert methods and Experimental methods. (Ch 9). (c)**

Coordinator(s)

Dr. Muazzam Siddiqui, Associate Professor

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Topics Coverage Durations

Topics	Weeks
Introduction to Usability	1
Introduction to Human Computer Interaction	1
Understanding the Human	1
Understanding the Computer	1
Understanding the Interaction	1
Identify need and establish requirements	1
Data gathering	1
Requirements	1
Tasks Analysis	1
Interaction design basic	1
Design rules	1
Design, Prototyping, and Constructing	1
User Interface Evaluation Techniques	1
Experimental evaluation	1