CPIT-280 Syllabus

Catalog Description

CPIT-280   Human-Computer Interaction
Credit: 3 (Theory: 3, Lab: 0, Practical: 1)
Prerequisite: CPIT-250
Classification: Department Required

The objective of this course is to study the fundamentals and principles of human computer interaction. Also, it is intended to develop the student's ability to explore and implement a usable design, in addition to measure, analyze, and evaluate the human computer interaction systems

Class Schedule

Lab/Tutorial 90 minutes 1 times/week

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

Textbook

Ben Shneiderman, Catherine Plaisant, Maxine Cohen, Niklas Elmqvist, Steven Jacobs, Nicholas Diakopoulos, , "Designing the User Interface", Pearson;(2016-04-15)

ISBN-13 9780134380384   **ISBN-10** 013438038X

Grade Distribution

Week	Assessment	Grade %
6	Exam 1	15
12	Exam 2	15
15	Lab Exam	20
15	Group Project	20
16	Exam	30

Topics Coverage Durations

Topics	Weeks
Interaction Design and Human-Computer Interaction - Beyond HCI	1
Usability of Interactive Systems	1
User Centered Design - Design Process	2
Prototyping	1
Understanding users and Data Gathering	1
Data Analysis, Interprtation and Presentation	1
Evaluating Interface Designs	2
Interaction Devices and Styles	1
Emerging Technologies	2
Information Design	1
Design Case Studies	1
Review Week	1

Last Articulated

December 18, 2017

Relationship to Student Outcomes

a	b	c	d	e	f	g	h	i	j	k	l	m	n
		x					x			x			

Course Learning Outcomes (CLO)

By completion of the course the students should be able to

1. Differentiate Interaction Design and Human-Computer Interaction and discuss the characteristics of good and bad designs. (c)
2. Apply techniques, how to measure usability, learnability, memorability, effectiveness and efficiency of a system (h)
3. Applying guidelines, principles, golden rules, laws of simplicity and following four Pillar's approach to have user friendly, effective and efficient systems. (h)
4. **Examine User-Centered Design approaches to design interfaces utilizing User Experiences (UXD). (h)**
5. Design a low-fidelity and High fidelity prototypes for a mobile and/or desktop applications. (c)
6. Acquiring user data through Data recording, Interviews, Questionaires, Observation and combined techniques (k)
7. **Analyze data gathered using quantitative and qualitative methods available in software packages and conclude to make necessary changes in interface desinging. (k)**
8. **Apply expert review methods, Heuristics, Consistency inspection, cognitive walkthorugh and formal usability inspection to evalaute system interfaces. (c)**
9. **Design and conduct HCI controlled experiments to measure usability inlined with common usability guidelines and standards. (c)**
10. Comparing different interaction devices and styles to understand what kind of interacting device and style may fit well to perform a given task. (k)
11. **Design an interaction style that allow users to interact through Emerging Technologies, e.g. Brain-Computer Interfaces in Virtual Environments. (k)**
12. Design a system that allow users to interact through Wearable Computing and Natural User Interfaces e.g. Gestures Recognition techniques (k)
13. Compile, how to present information in a way that fosters efficient and effective understanding of it. (c)
14. Assessing different case-studies to understand design and evaluation techniques through student's self learning. (h)
15. Review of all topics to be covered in final examination (c)

Coordinator(s)

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Coordinator(s)

Dr. Saim Rasheed, Associate Professor