CPIT-280 Common Syllabus

Catalog Description

CPIT-280 Human-Computer Interaction
Credit: 3 (Theory: 3, Lab: 0, Practical: 0)
Prerequisite: CPIT-250 **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, "Designing the User Interface", Addison-Wesley Longman;(2010)

ISBN-13 9780321537355 **ISBN-10** 0321537351

Student Assessment

Week	Assessment	Grade %
1	Graded Lab Work 1	5
4	Graded Lab Work 2	10
5	Homework Assignments	10
6	Exam 1	15
12	Exam 2	15
12	Graded Lab Work 3	5
14	Quiz	5
16	Exam	35

Topics Coverage Durations

Topic	Weeks
Interaction Design and Human-Computer Interaction - Beyond HCI	1
Usability of Interactive Systems - 1	2
Guidelines, Principles and Theories	1
Managing Design Process	1
Data analysis, interpretation and presentation - 1	1
Evaluating Interface Designs - 1	1
Evaluating Interface Designs - 2	1
Prototyping	1
Developing Effective Interfaces	1
Interaction Devices	1
Information Search	1
Emerging Technologies - 1	1
Emerging Technologies - 2	1

Course Assessment

Last Articulated

September 19, 2016

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. Explain the difference between Interaction Design and Human-Computer Interaction and discuss the characteristics of good and poor interaction design.
2. Analyse the existing system to measure its usability, learnability, memoability, effectiveness and efficiency.
3. *Design and conduct usability evaluation experiment for analysed system inlined with common usability guidelines and standards.
4. Apply the golden rules and laws of simplicity to design interfaces and to make decisions what kind of interaction style best fits to perform a given task.
5. Manage the design process to produce successful user interfaces by following four pillar's model of design.
6. *Analyze data gathered from questionnaires, interviews and observations studies using statistical methods available in software packages and conclude to make necessary changes in interface desinging.
7. Apply expert review methods, Heuristics, Consistency inspection, cognitive walkthorugh and formal usability inspection to evalaute system interfaces.
8. *Design purpose built laboratories to conduct usabiilty testing experiements and questionairs for user feedback.
9. Design a low-fidelity and High fidelity prototype for an application and/or system.
10. Analyse user-centered design methodologies to develop effective interfaces while utilizing user experiences.
11. Analyse variety of interaction devices to perform a given task to achive optimum results.
12. Apply Five-phase framework to clarify user interfaces for textual search and Searching Multimedia Docuemnts.
13. *Design an emerging interaction style that allow users to interact via Brain-Computer Interfaces in Virtual Environments.
14. *Design a system that allow users to interact through natural user interfaces using Gestures Recognition technology, KINECT.
15. Summarize all topics cosidered for final examination.

Coordinator(s)

Dr. Saim Ahmed, Assistant Professor

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Topics Coverage Durations

Topic	Weeks
Review Week	1