Kingdom of Saudi Arabia
Ministry of Education
Northern Border University
Faculty of Computing and Information Technology
Department of Computer Sciences

المملكة العربية السعودية
وزارة التعليم
جامعة الحدود الشمالية
كلية الحاسبات و تقنية المعلومات
قسم علوم الحاسبات

COURSE SYLLABUS

CPCS381 - HUMAN COMPUTER INTERACTION 1

Course Information			
Type	Required	**Prerequisite(s)**	CPCS351
Credit Hours	3	**Contact Hours**	3

Course Description

The objective of this course is to familiarize students with the skills and concepts of Human-Computer Interaction (HCI), including the understanding of user needs, interface design and interface evaluation. Topics include an introduction to HCI, HCI goals, interaction types, design principles, cognitive framework (Attention, Perception, Learning & decision making), HCI design, data gathering & analysis, interface types, natural user interface & interaction framework.

Course Learning Outcomes (CLO)

By the completion of the course the students should be able to:

1. Juxtapose the capabilities of both humans and computers from the viewpoint of human information processing.
2. Identify, criticize or elaborate interactive devices or interfaces based on the key design principles.
3. Introduce and apply paradigms, theories, models and framework informing interaction design.
4. Identify, criticize or elicit interactive devices or interfaces by referencing cognitive frameworks.
5. Analyze and discuss HCI frameworks in interfaces (groupware, ubiquitous computing, virtual reality, multimedia, and Word Wide Web-related environments).
6. Design an appropriate and suitable interactive system for a problem, in terms of technologies and devices according to the users' needs.

Textbook(s)			
Title	Designing the User Interface: Strategies for Effective Human-Computer Interaction		
Author(s)	Ben Shneiderman , Catherine Plaisant	**Publisher**	Addison Wesley
Edition	4th	**Year**	2004

References	
Book	**Website**
1. Alan D, Janet E. Gregory D. Russell B.," Human-Computer Interaction," 2003, Prentice Hall 2. Interaction Design: Beyond Human-Computer Interaction, Rogers, Helen Sharp, Jenny Preece Wiley 3rd edition 2011	

Evaluation	
Assessment Tools	**Marks**
Class participation	**5%**
Assignments & Discussions	**15%**
Quizzes	**5%**
Project, Report, Presentation	**15%**
Mid Term Exam	**20%**
Final Exam	**40%**

Tentative Topics Covered	
Week No	**Topic**
1	Introduction to Human Computer Interaction
2	Interaction Design & the User experience
3	Principles of Interaction Design
4	Interaction frameworks : Problem Space and Conceptualization
5	Interaction frameworks : Conceptual Modeling & Interface Metaphors
6	Interaction frameworks : Interface Metaphors
7	Interaction frameworks : Interaction Types
8	Cognitive frameworks: Background, Attention
9	Cognitive frameworks: Multitasking
10	Cognitive frameworks: Attention, Perception, Memory
11	Cognitive frameworks: Learning, problem solving, planning etc….
12	Interface Types
13	Project: Conception
14	Project: Execution
15	Project: Presentations & Evaluations