UNIVERSITY OF SARGODHA
DEPARTMENT OF COMPUTER SCIENCE

COURSE OUTLINE   Spring 2020

Course Tittle: **Human Computer Interaction**
Course Code: **CMP-3711**
Credit Hours: 3 Credit Hours

Instructor: ABID RAFIQ
Email: abid.rafiq@uos.edu.pk

DESCRIPTION & OBJECTIVES

This course will equip the student with the tools and techniques required to design user-friendly interactive systems, latest theories, principles guidelines in Human-Computer Interaction (HCI), User Experience (UX), usability and Interaction Design, Moreover Student will be able to understand the entire user-centred design and evaluation process; from understanding user needs to design interactive systems that meet those needs, to evaluate the usability of those (and existing systems) through user research. Students will be able to explain the capabilities of both humans and computers from the viewpoint of human information processing. Student will analyze and discuss HCI issues in groupware, ubiquitous computing, virtual reality, multimedia, brain computer interfaces and Word Wide Web-related environments and in Moblie Apps

READINGS

A. Preece, J., Rogers, Y., & Sharp, H. (may 2019). *Interaction design: Beyond human-computer interaction*(5th ed.) John Wiley & Sons Ltd. You can find all of the resources related to this book online from the book's website at http://www.id-book.com/index.php

B. Dix, A., Finlay, J., Abowd, G.D., & Beale, R. (2004). *Human computer interaction* (3rd ed.). Prentice Hall.
ISBN 0-13-046109-1.You can find all of the resources related to this book online from the book's website at http://www.hcibook.com/e3/plain/about/book/. This is currently the major textbook used for teaching undergraduate HCI courses.

C. Norman, D., The Design of Everyday Things, Doubleday, 2013, ISBN 0-385-2677-6.

CONTENTS

1.Introduction to HCI, interaction design 2.Principles and theories of HCI , 3.Use Experience data analysis 4.Usability 5.Deseign and Interaction Processes, 6.Deseign rules 7.Cognetive aspects 8.Understanding and Conceptualizing interaction 8.Universal Design 9.User Support 10.Deseign

rationale 11.Social interaction and groupware applications 12.Interfaces and Ubiquitous computing and augmented reality, 13 Task Analysis and Establishing requirements, 14 Design Prototyping, Dialog notation 15.Evalaution framework ,Cognitive models 16.Evalaution studies, ,inspection analytics and models, - Visual design - Principles and guidelines

COURSE SCHEDULE

Week	Topics and Readings
1.	Introduction to HCI, interaction design, Principles and theories of HCI , Human [B.CH 1], [A.CH 1]
2.	Usability and Usability Engineering ,emotional interaction [A.CH 1 AND CH 9], [B.CH 7]
3.	Design and Interaction Processes [A.CH 9]
4.	Design rules , Universal Design [B.CH 7,10]
5.	Cognitive aspects [A.CH 3], [B.CH 2] C.CH 5,6]
6.	Interfaces and Ubiquitous computing and augmented reality, [A.CH 6] [B.CH 20]
7.	Understanding and Conceptualizing interaction [A.CH 2] [C.CH 7]
8.	Social interaction and groupware applications [A.CH 4] [B.CH 19]
MID TERM EXAM WEEK	
9.	Use Experience data analysis [C.CH 3,4,5]
10.	.User Support ,Design rationale [B.CH 11] [B.CH 17]
11.	Task Analysis and Establishing requirements, [A.CH 10]
12.	Design Prototyping, Prototyping - Wireframe prototypes [A.CH 11]
13.	Dialog notation [B.CH 16],Presentation
14.	- Visual design - Principles and guidelines [C.CH 5,6]
15.	Evaluation framework ,Cognitive models [A.CH 12,13] B.[CH 9]
16.	Evaluation studies, inspection analytics and models, , Fitts Law A.CH 14,15]
FINAL TERM EXAM WEEK	

RESEARCH PROJECT

1. Usability analysis of mobile browsers ,pre requisite use of SPSS is required

ASSESSMENT CRITERIA.

1. Sessional:
    a. Project: 5 marks

     b. Presentation and User experience research Analysis: 5 Marks
     c. Quiz and Class test : 3 Marks
     d. Assignment: 5 Marks
     e. Attendance: 2 Marks

2. Final exam: 50 Marks
3. Mid term Exam :30 Marks

RULES AND REGULATIONS

1. 80% class attendance
2. Late submission of assignment will be considered F grade
3. Subject Project will be mandatory in 15th week. The group project is the focal point of this course. The project is divided into four phases and every phase will have a separate deadline – starting from the user research phase and ending at the final presentations
4. Student must participate in user experience research