Sir Syed University of Engineering & Technology

Department of Software Engineering

COURSE INFORMATION SHEET

Course Code	:	SWE-308
Course Title	:	Human Computer Interaction
Credit Hours	:	3+0
Prerequisites	:	None
Instructor Name	:	Engr. Samreena Bano, Ms.Hafsa Nizami
Email & Contact Info.	:	sbano@ssuet.edu.pk , hnizami@ssuet.edu.pk

COURSE OUTLINE:

The increasing complexity of software and the proliferation of information make intelligent user interfaces increasingly important. The promise of interfaces that are knowledgeable, sensitive to our needs, agile, and genuinely useful has motivated research across the world to advance the state of the art and practice in user interfaces that exhibit intelligence. The text covers the topic well.

The Human, Computer and Interaction, Usability paradigm and principles, Introduction to design basics, HCI in software process, Design rules, prototyping, evaluation techniques, task analysis, Universal design and User support and Computer Supported Cooperative Work. Introduction to specialized topics such as Groupware, pervasive and ubiquitous applications.

COURSE LEARNING OUTCOMES (CLOs) and its mapping with Program Learning Outcomes (PLOs):

Upon completion of this course, students will be able to:

CLO #	CLO Statement	PLOs	Bloom's Taxonomy
CLO_1	**Outline** Practices prevalent in HCI Domain	PLO_1 (Engineering Knowledge)	C1 (Knowledge)
CLO_2	**Apply** the principles and designing application of HCI, with respect to the understanding of human psychology.	PLO_3 (Design/Development of Solutions)	C3 (Apply)
CLO_3	**Correlate** the software engineering methods with HCI.	PLO_3 (Design/Development of Solutions)	C4 (Analyzing)
CLO_4	**Prepare** and achieving the knowledge about importance of HCI with usage in the market.	PLO_10 (Communication)	C5 (Evaluating)

RELATIONSHIP BETWEEN ASSESSMENT TOOLS AND CLOs:

Assessment Tools	CLO_1(20)	CLO_2(20)	CLO_3(30)	CLO_4(30)
Quizzes	15% (03)	15% (03)	13% (04)	-
Assignments	15% (03)	15% (03)	-	13% (04)
Midterm Exam	75% (15)	75% (15)	-	-
Final Exam	25% (05)	25% (05)	66.66% (20)	66.66%(20)

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GRADING POLICY:

Assessment Tools	Percentage (%)
Quizzes/Assignments	20%
Midterm Exam	30%
Final Exam	50%
Total	**100 Marks**

TEXTBOOK:

- Human-Computer Interaction", Alan Dix, Computing Department, Lancaster University Janet E. Finlay, Leeds Metropolitan University, Gregory D. Abowd, Georgia Institute of Technology, Russell Beale, University of Birmingham ISBN-10: 0130461091

REFERENCE BOOKS:

- "Designing the User Interface: Strategies for Effective Human-Computer Interaction", Ben Shneiderman, University of Maryland Catherine Plaisant, University of Maryland ISBN-10: 0321197860 ISBN-13: 9780321197863 Publisher: Addison-Wesley 4th Ed or Latest Edition.

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COURSE PLAN

Week #	Course plan	Recommended Reading	Assessment Tools
Week 1	**Introduction and Relationship of HCI** and Software Engineering.	**Chapter#1** Pg#11 to 22	
Week 2	Goal of HCI, Human Senses, Memory, Thinking and Emotions.	**Chapter#1** Pg#27 to 53	
Week 3	**Introduction to Computer** Text Entry Devices, Display Devices, Physical Control, Memory, Processing and Networks.	**Chapter#2** Pg#59 to 114	Assignment #1
Week 4	**Introduction to Interaction**, Models of Interaction, Framework and HCI, Ergonomics, Interaction Style, Elements of WIMP interface and interactivity.	**Chapter#3** Pg#123 to 145	Quiz # 1
Week 5	**Introduction to Paradigms**, Paradigm for interaction.	**Chapter#4** Pg#164 to 185	
Week 6	**Interaction Design Basic** Process of Design, Focus, Navigation, Screen Design and Layout.	**Chapter#5** Pg#191 to 211	
Week 7	**HCI in the Software Process**, Software Life Cycle Interactive design and prototyping Design Rationale.	**Chapter#6** Pg#225 to 248	Assignment #2
MID TERM			
Week 9	**Design Rules** Principle to support usability Golden Rules and Heuristics HCI Pattern.	**Chapter#7** Pg#258 to 284	Quiz # 2
Week 10	**Heuristic Evaluation**, Model Base, User Participation through Evaluation.	**Chapter#9** Pg#318 to 327	
Week 11	**Universal Design** Principle, Multi Sensor System Speech Designing for development.	**Chapter#10** Pg#365 to 375	
Week 12	Recruitment & Approaches to **User Support**, Adaptive Health Systems.	**Chapter#11** Pg#395 to 412	
Week 13	**Task Analysis** HTA as Grammar Knowledge base Analysis, Task Description Hierarchy, Source of Information and Relationship Techniques.	**Chapter#15** Pg#510 to 525	Assignment #3
Week 14	**Groupware** Computer Medicated Communication Meeting and Decision Support System.	**Chapter#19** Pg#663 to 679	Quiz # 3
Week 15	**Ubiquitous Computing** & Augmented Reality Evaluation and Changes.	**Chapter#20** Pg#716 to 737	
FINAL EXAMINATION			

Proa: Proakis, **Opp:** Oppenheim; **Fec:** I. Feachor, **Tan:** Li-Tan

Instructor Name & Signature (With Date): **Engr.Sumreena Bano (03/10/2023)**

Chairman, Department of Software Engineering: _____