



## Lahore University of Management Sciences

### CS 466 – Human Computer Interaction CS 5613 Human Computer Interaction Design Spring 2015-2016

Instructor	Suleman Shahid
Room No.	SBASSE 9-G23A
Office Hours	10:30 AM – 11:45 AM (Tuesday and Thursday) -
Email	<a href="mailto:suleman.shahid@lums.edu.pk">suleman.shahid@lums.edu.pk</a>
Telephone	042-35608192 (from inside campus dial 8192)
Teaching Fellow/TAs	
TA Office Hours	
Course URL (if any)	

Course Basics				
Credit Hours				
Lecture(s)	Nbr of Lec(s) per week	2	Duration	75 minutes per lecture
Recitation/Lab	Nbr of Lec(s)		Duration	
Tutorial	Nbr of Lec(s)		Duration	

Course Distribution	
Core	No
Elective	Yes
Open for Student Category	Junior, Senior, Graduate
Close for Student Category	Freshmen, Sophomore

COURSE DESCRIPTION	
<p>This course offers a thorough introduction into both the underlying theories of human-computer interaction and the practical application of these insights. This course will equip students with tools and techniques required to design user-friendly interactive systems. This is not a programming-intensive course but students are expected to develop working prototypes.</p> <p>The point of departure for this course is the design of everyday things. It will be shown that the principles underlying the design of such artifacts also apply to the design of the digital media/interactive systems/software. It will then be shown how concepts such as usability and utility may be defined and operationalised, and how the user centered design process may contribute to the achievement of optimal results from a usability and utility perspective. After this, the user interface development process also known as User-centered design (UCD) process will be discussed in detail. The group project is the focal point of this course and will be based on the UCD process.</p>	

COURSE PREREQUISITE(S)	
	None

COURSE OBJECTIVES	
<p>At this end of this course, students should</p> <ol style="list-style-type: none"><li>1. be aware of Interface Design/Usability Engineering as a field</li><li>2. have read and understood major HCI theories and design principles</li><li>3. have gone through three major phases (User research, Design and Evaluation) of user-centered design cycle</li><li>4. be able to apply theories and design principles during the product design process</li><li>5. have some ideas for how to deal with real-world constraints for building effective user interfaces and applications (apps).</li></ol>	



## Lahore University of Management Sciences

Learning Outcomes	
<p>Students will gain a hands-on experience with the user interface design process (user research, design, development and evaluation). After taking this course, students will be able to critique everyday user interfaces, and challenge their own ‘design intuition’. Students will also have an idea about understanding users’ problems, designing usable user interfaces and evaluating these user interfaces with end users.</p>	
<ol style="list-style-type: none"><li>1. Enabling Knowledge: Understating the key HCI theories and design principles for designing user-friendly solutions</li><li>2. Critical Thinking and Analysis: Ability to observe users in their working environment and analyze their work practices/usage behavior in a creative and critical manner to identify (possible) problems</li><li>3. Problem Solving: Ability to design and implement digital interactive systems in a creative manner to solve everyday users’ problems, based on in-depth analysis of users’ needs.</li><li>4. Communication: Ability to explain their ideas to diverse stakeholders (end users, team members, business manager and technical managers)</li><li>5. Responsibility: Ability to apply relevant ethical considerations while conducting user research, designing user centered technologies and evaluating end products, particularly while working with special user groups i.e. children, elderly, and patients.</li></ol>	
Grading Breakup and Policy	
Mid-term:	20%
Quizzes:	10%
Project Assignments:	65%
Review meetings:	5%

Examination Detail	
Midterm Exam	Yes/No: Yes Duration: 70 mins Preferred Date: Mid-term exam week Exam Specifications: Closed Book / Closed Notes
Group Project	<p>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</p> <p><b><i>To be able to pass this course, you are required to pass all project phases.</i></b></p>
Final Exam	The course is based on a semester long project and there will be four major deadlines during the course.



## Lahore University of Management Sciences

COURSE OVERVIEW (TENTATIVE)			
Week/ Lecture/ Module	Topics	Recommended Readings	Objectives/ Application
1	- Introduction to HCI - Course Logistics and assignment details		
2	- Good and Bad design: Part 1 - Design principles		
3	- Good and Bad design: Part 2 - User-centered design (UCD) process		
4	- Design processes - HCI theories		
5	- Conducting user research		
6	- Conceptual design (from requirements to design)		
7	- Prototyping - Wireframe prototypes		
8	- Project review and presenting week		
9	- Visual design - Principles and guidelines		
10	- Evaluation using heuristics		
11	- Usability engineering process Usability evaluation		
12	- Designing for diverse platforms and audiences - Advance HCI methods		
13	- Current trends in HCI		
14	- Presenting to business and technical audience - Final presentations and demos		

Textbook(s)/Supplementary Readings
Chapters from following textbooks: 1. Norman, D., <i>The Design of Everyday Things</i> , Doubleday, 2002, ISBN 0-385-2677-6. 2. Helen Sharp, Yvonne Rogers, Jenny Preece, <i>Interaction Design: Beyond Human-Computer Interaction</i> , Wiley Publishers, 2007, ISBN 978-0-470-01866-8. 3. Cooper, A. <i>About Face 3: The Essentials of Interaction Design</i> , Wiley Publishers, 2007, ISBN 978-0470084113 Articles: 1. Online articles will be provided after each lecture.  Reference Material: Will be provided at the end of each lecture.