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***IQRA National University, Peshawar***

**Department of Computer Science**

**Course Code: Course Title: Human Computer Interaction**

**Program: BS (SE), (CS) Module: 6th**

**Semester Plan**

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| **Week#** | **Content** |
| 1 | Introduction to class, HCI. Why HCI? Significance of HCI Course with respect to present era and your degree. |
| 2 | The human, Information I/O, visual Communication, Human auditory process, haptic, human body movement. |
| 3 | The Human Memory, Information stored in memory, sensory, short-term, long-term, Information processed and applied, reasoning, problem solving, skill, error, Emotion influences human capabilities, Each person is different. Supplementary discussion of Research paper presentation. |
| 4 | The Human body with respect to perception, perceptual process, The Environmental Stimulus, The Attended Stimulus, The Image on the Retina, Transduction, Neural Processing, Perception, Recognition, Action, Organization of perception, Similarity, Nearness, Closure, Continuity and Common fate. |
| 5 | The Computer, Communication between User and Computer Input Output Devices, Touch. Supplementary discussion of Research paper presentation. |
| 6 | The Interaction with respect to Human Computer Interaction, Interaction models, translations between user and system, ergonomics, physical characteristics of interaction. |
| 7 | Importance of Context in Designing, Need Finding, Put yourself in shoes of User. |
| 8 | Research Paper Presentation. Discussion of Mid-term course, Paper Pattern and Exam Write-up Skills. |
| 9 | Discussion on Mid-Term paper, Generic mistakes made out by students in mid-term exam, their optimal solution. Graphic design in HCI. Simplicity, Contrast, White Space, Balance, Alignment. Techniques for simplicity.  |
| 10 | Interaction Design Basics, Interactions And Intervention, what is design, Persona, Central message, The process of design, Basic principles, Grouping, structure, order, Alignment, Use of white space. |
| 11 | Design Evaluation, Severity Rating, Nelson Design Heuristics. Experimental studies on groups. |
| 12 | Information Evaluation, Visual Variables, Practical discussion of real life case studies for understanding information evaluation. |
| 13 | More on Information Visualization, Visual Variable, Tag cloud, Wardle, table Lens. Supplementary Discussion on Assignment about application design using UI Tool.  |

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| 14 | Introduction to Evaluation, Definition, concepts, needs, Goals of evaluation, Evaluation Designs, Survey, Lab Experiment, Field Study, Comparison between evaluation methods and discussion about usage of particular type with respect to scenario to be evaluation. |
| 15 | Hands on Exercise of UI Tool and Discussion on FYP Design. |
| 16 | Presentation of UI Tool and Project UI. Discussion of HCI course, feedback. Discussion of Final-term course, Paper Pattern. |

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 Course Teacher Head of Department