IV Year B.Tech. ECM I - Semester

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CS426 HUMAN COMPUTER INTERACTION (ELECTIVE - IV)

Course Description and Objectives:
The student will learn how interaction with computers takes place at user interface, which comprises both hardware and software. To facilitate communication between students of psychology, design, and computer science on user interface development projects. To facilitate communication between students of psychology, design, and computer science on user interface development projects.

Course Outcomes:
- *The student will learn, The importance of User Interface and interaction with computers using a Graphical User Interface and Keyboard and function keys along with video drivers*
- *To provide the future user interface designer with concepts and strategies for making design decisions.*
- *To expose the future user interface designer to tools, techniques, and ideas for interface design.*
- *To introduce the student to the literature of human-computer interaction.*

UNIT I - Introduction :
Importance of user Interface - definition, importance of good design. Benefits of good design. A brief history of Screen design, The graphical user interface - popularity of graphics, the concept of direct manipulation, graphical system, Characteristics, Web user - Interface popularity, characteristics- Principles of user interface.

UNIT II - Design process :
Human interaction with computers, importance of human characteristics human consideration, Human interaction speeds, and understanding business junctions.

UNIT III - Screen Designing :

Design goals - Screen planning and purpose, organizing screen elements, ordering of screen data and content - screen navigation and flow - Visually pleasing composition - amount of information - focus and emphasis - presentation information simply and meaningfully – information Screen Designing:- Design goals - Screen planning and purpose, organizing screen elements, ordering of screen data and content - screen navigation and flow - Visually pleasing composition - amount of information - focus and emphasis - presentation information simply and meaningfully - information retrieval on web - statistical graphics - Technological consideration in interface design.

UNIT IV - Windows :

New and Navigation schemes selection of window, selection of devices based and screen based controls. Components - text and messages, Icons and increases - Multimedia, colors, uses problems, choosing colors.

UNIT V - Software tools :

Specification methods, interface - Building Tools. Interaction Devices - Keyboard and function keys - pointing devices - speech recognition digitization and generation - image and video displays - drivers.

TEXT BOOKS :

1. Wilbert O Galitz "The essential guide to user interface design", Wiley Computer publishing 2nd edition.
2. Ben Shneidermann,Catherina Plaisant "Designing the user interface", Pearson Education Asia. 3rd Edition 2007,

REFERENCE BOOKS:

1. Alan Dix, Janet Fincay, Gre Goryd, Abowd, Russell Bealg "Human - Computer Interaction" Pearson Education
2. Rogers, Sharps "Interaction Design Prece", Wiley Dreamtech,