4/4 B.Tech. SECOND SEMESTER

IT8T3A   **HUMAN COMPUTER INTERACTION**   **Credits: 4**

Lecture: 4 periods/week   **Internal assessment: 30 marks**
Tutorial: 1 period /week   **Semester end examination: 70 marks**

Objectives:

- To explain basics of User Interface Design and importance of design.
- To discuss aboutthe characteristics of design and principles of user Interface.
- To explain the relationship between user and system.
- To provide the user interface design itemslike menu creation and windows creation.
- To discuss the concepts of menus, windows, interfaces, business functions.
- To discuss various problems in windows design with color andtext.
- To impart the importance of documentation.

Outcomes:

Students will be able to

- Understand the importance of user interface design.
- Get the knowledge of characteristics of design.
- Understand the Interaction between the human and computer components.
- Implement the principles of good screen design.
- Develop effective menus and navigation systems.
- DesignHuman Computer Interfaces.

Syllabus:

UNIT - I
Introduction: Importance of user Interface – definition, importance of good design. Benefits of good design.A brief history of Screen design.

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

UNIT - IV
Screen Designing: Design goals , Screen planning and purpose, organizing screen elements, ordering of screen data and content – screen navigation and flow – Visually pleasing composition.

UNIT V
Presenting Information:–amount of information-simply and meaningfully – information retrieval on web – statistical graphics – Technological consideration in interface design.

UNIT - VI
Windows: New and Navigation schemes selection of window, selection of devices based and screen based controls.

UNIT - VII
Components: texts and messages, Icons and increases – multimedia, colors, uses problems, choosing colors.

UNIT - VIII
Device based controls: character of device based controls-trackball-joystick-graphic tablet-touch screen-light pen-voice mouse-keyboard-selecting proper device based controls-keyboard Vs mouse-printer guidelines.

Text Books :

1. The essential guide to user interface design, Wilbert O Galitz, Wiley DreamaTech.

Reference Books:

1. Human – Computer Interaction. ALAN DIX, JANET FINCAY, GRE GORYD, ABOWD,
   RUSSELL BEALG,PEARSON.
2. Designing the user interface. 3rd Edition Ben Shneidermann , Pearson Education Asia.
3. Interaction Design PRECE, ROGERS, SHARPS. Wiley Dreamtech,
4. User Interface Design, SorenLauesen , Pearson Education.