16IT301 HUMAN COMPUTER INTERACTION

Hours Per Week :

L	T	P	C
3	1	-	4

Total Hours :

L	T	P	WA/RA	SSH/HSH	CS	SA	S	BS
45	15	-	3	50	4	6	3	2

Course Description and Objective:

This course offers user interface interaction with computing devices. The objective of this course is to provide the student with the knowledge of user interface design model and its usage.

Course Outcomes:

The Student will be able to:

- understand the basic guidelines and principles of GUI design.

- identify how a computer system can model to match the human diversity.

SKILLS:

- ✓ *Design a user friendly Graphical User Interface*
- ✓ *Explore human charisterstics and interaction abilities*
- ✓ *Differentiate between good and poor screen design*
- ✓ *Apply windows navigation schemes*

ACTIVITIES:

o *Analysing the user interface design models.*

o *Designing interfaces for systems such as Insurance information system, book store, shoe company, front office system, etc.,*

UNIT - 1   **L-8**

INTRODUCTION TO UI: Defining the user interface, Importance of good design, Benefits of good design, The graphical user interface, The web user interface, Merging of graphical business systems and the web, Principles of user interface design.

UNIT - 2   **L-8**

DESIGN PROCESS: Human interaction with computers, Important human characteristics in design, Human considerations, Human interaction speeds, Performance versus preferences, Definition and requirements analysis, Determining basic business functions, Design standards or style guides, System training and documentation needs.

UNIT- 3   **L-11**

SCREEN DESIGNING: Design goals, Screen meaning 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 considerations in interface design.

UNIT- 4   **L-9**

MENUS AND NAVIGATION SCHEMES: Structures of menus, Functions of menus, Content of menus, Formatting of menus, Phrasing the menu, Selecting menu choices, Navigating menus, Kinds of graphical menus.

UNIT - 5   **L-9**

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", 2nd edition, Wiley, 2002.

2. Alan Dix, Janet Fincay, GreGoryd, Abowd and Russell Bealg, "Human Computer Interaction", 3rd edition, Pearson Education , 2009.

REFERENCE BOOKS:

1. Ben Shneidermann and CatherinaPlaisant, "Designing the user interface", 3rd edition, Pearson Education Asia, 2007.

2. Preece, Rogers and Sharps, "Interaction Design", 3rd edition, Wiley Dreamtech, 2011.