

3/3 MCA First Semester

CA5T5D

HUMAN COMPUTER INTERACTION

Credits : 4

Lecture Hours : 4 periods / week

Internal assessment : 30 Marks
Semester and Examination: 70 Marks

Course Description:

This course is intended to provide students with a knowledge that can make them appreciate the use of various designing approaches with different types of tools, which will be designed as per user requirements. At the end of the Course participants are expected to demonstrate a working knowledge of the various Graphical User Interfaces, Design Process and Screen Designing. By using Software tools he can design interfaces as well as being able to formulate organizational problems into icons and symbols for seeking optimal solutions user models.

Course Objective:

- Understand the importance of Interface and good design patterns
- Understand the importance of Graphical User Interface
- Understand the approaches of Design Process and Screen Designing
- Understand the importance of drag and drop methodologies for navigating the operations
- Understand the importance of software tools and Interaction devices

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 – amount of information – focus and emphasis – presentation information simply and meaningfully – information retrieval on web – statistical graphics – Technological consideration in interface design.

UNIT V:

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

UNIT VI:

Components: text and messages, Icons and increases – Multimedia, colors, uses problems, choosing colors.

UNIT VII:

Software tools: Specification methods, interface – Building Tools.

UNIT VIII:

Interaction Devices: Keyboard and function keys – pointing devices – speech recognition digitization and generation – image and video displays – drivers.

Learning Resources

Text Books:

1. The essential guide to user interface design, Wilbert O Galitz, Wiley DreamTech, 3/e, 2007.
2. Designing the user interface. Ben Shneidermann , Pearson Education Asia, 3/e, 1998.

Reference Books:

1. Human – Computer Interaction. Alan Dix, Janet Fincay, Gre Goryd, Abowd, Russell Bealg, Pearson Education, 3/e, 2004.
2. Interaction Design Prece, Rogers, Sharps. Wiley Dreamtech3/e, 2011.
3. User Interface Design, Soren Lauesen , Pearson Education, 2005.