

HUMAN COMPUTER INTERACTION (ELECTIVE –I)

Course code: 13CS1102

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Course Educational Objectives:

The student will learn how interaction with computers takes place at user interface, which comprises both hardware and software.

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

UNIT-I

(12 Lectures)

INTRODUCTION:

Importance of user Interface – definition, importance of good design. Benefits of good design. A brief history of Screen design.

UNIT-II

(12 Lectures)

THE GRAPHICAL USER INTERFACE :

Popularity of graphics, the concept of direct manipulation, graphical system, Characteristics, Web user – Interface popularity, characteristics-Principles of user interface.

DESIGN PROCESS – Human interaction with computers, importance of human characteristics human consideration, Human interaction speeds, and understanding business junctions.

UNIT-III

(12 Lectures)

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.

WINDOWS – New and Navigation schemes selection of window, selection of devices based and screen based controls.

UNIT-IV **(12 Lectures)**

COMPONENTS – Text and messages, Icons and increases – Multimedia, colors, uses problems, choosing colors.

SOFTWARE TOOLS – Specification methods, interface – Building Tools.

UNIT-V **(12 Lectures)**

INTERACTION DEVICES – Keyboard and function keys – pointing devices – speech recognition digitization and generation – image and video displays – drivers.

TEXT BOOKS:

1. Ben Shneiderman, *Designing the User Interface*, 3rd Edition, Pearson Education Asia, 2007.

REFERENCES:

1. Alan Dix, Janet Finclay, *“Human Computer Interaction”*, 3rd Edition, Pearson, 2003.
2. Rogers, Sharps, *Interaction Design*, PRECE, 1st Edition, Wiley Dreamtech, 2002
3. Soren Lauesen, *“User Interface Design”*, 1st Edition, Pearson Education, 2005
4. Willbert O Galitz, *“The Essential guide to User Interface design”*, 3rd Edition, Wiley Dreamtech, 2007

WEB RERENCES:

1. nptel.iitm.ac.in/courses/106103115/41y

