IV/IV B. TECH. SECOND SEMESTER
HUMAN COMPUTER INTERACTION (Elective-IV)

Course Code: CS8T3A   **Credits: 3**
Lecture: 3 periods/ week   **Internal assessment: 30 Marks**
Tutorial: 1period/week   **Semester end examination: 70 Marks**

Prerequisites: Knowledge on software engineering,

Course Objectives: •
1. Design, implement and evaluate effective and usable graphical computer interfaces.
2. Describe and apply core theories, models and methodologies from the field of HCI.
3. Describe and discuss current research in the field of HCI.
4. Describe special considerations in designing user interfaces

Course Outcomes:

At the end of this course student will:

CO1) Understand the concepts and principles of graphical user interface and its design process

CO2) Create effective screen design using screen elements, windows and components

CO3) Select appropriate tool for user interface design

CO4) Identify appropriate user devices for better user interaction

UNIT I:

Introduction: Importance of user interface, definition, importance of good design, Brief history of Screen Design.

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 considerations, Human interaction speeds.

UNIT III:

Screen designing: Interface 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, presenting information simply and meaningfully, technological considerations in interface design.

UNIT IV:

Windows: Characteristics, components, operations. Selection of device based and screen based controls.

UNIT – V:

Components: Icons and images, Multimedia, choosing proper colors

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

Learning Resources:

Text Books:
1. Wilbert O Galitz, The Essential Guide to User Interface Design. 2 ed, Wiley DreamaTech
2. Ben Shneidermann, Designing the User Interface. 3 ed, Pearson Education Asia

Reference Books:
1. Alan Dix, Janet Fincay, Gre Goryd, Abowd and Russell Bealg, Human Computer Interaction. Pearson.
2. Prece, Rogers, Sharps Interaction Design. Wiley Dreamatech,
3. Soren Lauesen, User Interface Design. Pearson Education.

E-learning resources:
http://onlinevideolecture.com/?course_id=1329&lecture_no=9
https://class.coursera.org/hci/lecture