



**STANLEY**  
**COLLEGE OF ENGINEERING & TECHNOLOGY FOR WOMEN**  
( Approved by AICTE , New Delhi | Affiliated to Osmania University ,Hyderabad)  
Address : Chapel Road, Abids ,Hyderabad

SE 579

## HUMAN COMPUTER INTERACTION

### UNIT- I

**Interaction Paradigms:** Computing Environments, Analyzing Interaction Paradigms, Interaction Paradigms

**Interaction Frameworks and Styles:** Frameworks for Understanding Interaction, Coping with Complexity, Interaction Styles

### UNIT- II

**Interaction Design Process:** Iterative Design, User-Centered Design, Interaction Design Overview of Interaction Design Models

**Discovery :** Discovery Phase Framework, Collection, Interpretation , Documentation

**Design :** Conceptual Design, Physical Design, Evaluation, Interface Design Standards, Designing the Facets of the Interface

### UNIT- III

**Design Principles:** Principles of Interaction Design, Comprehensibility, Learnability, Effectiveness/Usefulness, Efficiency/Usability, Grouping, Stimulus Intensity , Proportion , Screen Complexity, Resolution/Closure, Usability Goals

**Interaction Design Models:** Model Human Processor , Keyboard Level Model, GOMS, Modeling Structure, Modeling Dynamics, Physical Models

**Usability Testing:** Usability, Usability Test, Design the Test, Prepare for the Test, Perform the Test, Process the Data

### UNIT- IV

**Interface Components:** The WIMP Interface, Other Components

**Icons :** Human Issues Concerning Icons, Using Icons in Interaction Design, Technical Issues Concerning Icons

**Color:** The Human Perceptual System, Using Color in Interaction Design, Color Concerns for Interaction Design, Technical Issues Concerning Color

## **UNIT- V**

**Text :** Human Issues Concerning Text, Using Text in Interaction Design, Technical Issues Concerning Text

**Speech and Hearing :** The Human Perceptual System, Using Sound in Interaction Design, Technical Issues Concerning Sound

**Touch and Movement:** The Human Perceptual System, Using Haptics in Interaction Design, Technical Issues Concerning Haptics

### ***Suggested reading:***

1. Steven Heim, *The Resonant Interface: HCI Foundations for Interaction Design*, Addison-Wesley, 2007
2. J. Preece, Y. Rogers, and H. Sharp, *Interaction Design: Beyond Human-Computer Interaction*, Wiley & Sons, 2nd Ed., 2007
3. Ben Shneiderman , Catherine Plaisant, *Designing the User Interface: Strategies for Effective Human-Computer Interaction*, 5th edition, , Addison-Wesley, 2009.