

<b>Elective V : Human Computer Interface (TH)</b>	
<b>Total Credits: 03</b>	<b>Subject Code: BTCT702T-3</b>
<b>Teaching Scheme :</b> <b>Lectures: 03 Hours/Week</b> <b>Tutorials: 00 Hours/Week</b> <b>Practical: 00 Hours/Week</b>	<b>Examination Scheme :</b> <b>Duration of University Exam : 03 Hrs.</b> <b>College Assessment : 30 Marks</b> <b>University Assessment:70 Marks</b>

### **Course Objectives:**

1. To Understand basic of human computer interaction.
2. To describe interaction design and how it relates to human computer interaction and other fields.
3. To use, adapt and extend classic design standards, guidelines, and patterns.
4. To study types of mobile application along with designing.

### **Course Outcomes:**

On successful completion of the course, students will be able

1. Describe the capabilities of both humans and computers.
2. Design effective dialog for HCI.
3. Identify the stake holder's requirements and choose the appropriate models.
4. Develop mobile HCI using mobile elements and tools.
5. Design web interfaces using different techniques.

### **UNIT I**

**(07Hrs)**

Foundations of HCI: The Human - I/O channels, Memory, Reasoning and problem solving;

The computer - Devices, memory, processing and networks; Interaction - Models, frameworks, Ergonomics, styles, elements, interactivity Paradigms.

### **UNIT II**

**(08Hrs)**

Design & Software Process : Interactive Design basics, process, scenarios, navigation, screen design, Iteration and prototyping. HCI in software process, software life cycle, usability engineering, Prototyping in practice, design rationale. Design rules, principles, standards, guidelines, rules. Evaluation Techniques, Universal Design.

### **UNIT III**

**(07Hrs)**

Models and Theories : Cognitive models, socio-organizational issues and stake holder requirements, Communication and collaboration models - Hypertext, Multimedia and WWW.

### **UNIT IV**

**(07Hrs)**

Mobile HCI - Mobile Ecosystem: Platforms, application frameworks - Types of Mobile Applications: Widgets, applications, Games - Mobile Information Architecture, Mobile 2.0, Mobile Design: Elements of mobile Design, tools.

**UNIT V****(07Hrs)**

Web Interface Design - Designing web interfaces, drag and drop, direct selection, contextual tools, overlays, inlays and virtual pages, process flow. case studies.

**Text Books:**

1. Alan Dix, Janet Finlay, Gregory Abowd, Russell Beale, “Human Computer Interaction”, 3<sup>rd</sup> Edition, Pearson Education, 2004.
2. Brian Fling, “Mobile Design and Development”, First Edition , O’Reilly Media Inc., 2009.
3. Bill Scott and Theresa Neil, “Designing Web Interfaces”, First Edition, O’Reilly,2009.