



## CO,PO,PSO JUSTIFICATION

CO No	PO/ PSO	CL	Justification
1	1	3	Strongly mapped as student can apply Fundamentals of computer knowledge to build graphical user interfaces.
2	1	3	Strongly mapped as students learn to use various kinds of interaction mechanisms.
	2	3	Strongly mapped as students can use various tools which are used to understand the problem at various levels.
	3	2	Moderately mapped as students will be able to design interface to provide solutions for various problems.
	5	2	Moderately mapped as students can analyze the need of various graphical tools and appropriate tools to build interface.
3	1	3	Strongly mapped as student can learn various kinds of simulation mechanisms for interaction.
	2	3	Strongly mapped as student can analyze the complex interfaces those are used in various real time applications.
4	1	3	Strongly mapped as students apply the concepts of GUI and Interaction with computer in professional developments.
	2	3	Strongly mapped as students will be able to design and implement beautiful interfaces for various problems.
	5	3	Strongly mapped as students can apply various tools for designing the graphical interfaces.
5	1	3	Strongly mapped as students can understand the importance various kinds of documentation.
	3	3	Strongly mapped as students can prepare documentation for describing the usage of interface.

### UNIT-I

**8 Hours**

Introduction to Usability of Interactive Systems: Introduction, usability goals and measures, usability motivations, universal usability, goals for our profession Managing Guidelines, Principles, and Theories: Introduction to Guidelines, Principles and Theories.

### UNIT-II

**8 Hours**

Design Processes: Introduction, Organizational Support for design, The Design Process, Design Framework, Design Methods, Design Tools, Practices and patterns, Social Impact Analysis, Legal Issues.

Direct Manipulation and Immersive Environments: Introduction ,Direct Manipulation, Examples of Direct Manipulation, 2-D and 3-D Interfaces, Teleportation and Presence, Augmented and Virtual Reality.

### UNIT-III

**8 Hours**

Fluid Navigation: Introduction, Navigation by Selection, Small Displays, Content Organization, Audio Menus, Form Fill-in and Dialog Boxes.

Expressive Human and Command Languages: Introduction, Speech Recognition, Speech Production, Human Language Technology, Traditional Command Languages.

**UNIT-IV****8 Hours**

Devices: Introduction to Keyboards and Keypads, Pointing Devices, Displays.

Advancing the User Experience: Introduction , Display Design , View (Window) ,Management , Animation , Webpage Design , Color , Non-anthropomorphic Design , Error Messages.

**UNIT-V****8 Hours**

User Documentation and Online Help: Introduction, Online Vs Paper Documentation, Reading from paper Vs from Displays, Shaping the content of the Documentation, Accessing the Documentation, Online tutorials and animated documentation, Online communities for User Assistance, The Development Process.

**Text Books:**

1. Ben Shneiderman, Catherine Plaisant, Maxine Cohen, Steven Jacobs, Niklas Elmquist Designing the User Interface: Strategies for Effective Human,Computer Interaction, Sixth Edition, Pearson Education, 2017.

**Reference Books:**

1. Preece, Rogers and Sharps, "Interaction Design", 3rd edition, Wiley Dreamtech, 2011.
2. The Essential guide to user interface design,2/e, Wilbert O Galitz, Wiley DreamaTech.
3. Human Computer, Interaction Dan R.Olsan, Cengage ,2010.
4. Jenny Preece, Helen Sharp, Yvonne Rogers, Interaction Design: Beyond Human Computer Interaction, Wiley, 5th Edition, 2019. ( Experiments)

**Micro Syllabus of Digital Interaction Design**

<b>Unit-I: Introduction to Usability of Interactive Systems &amp; Guidelines – Principles – Theories</b>		
<b>Unit</b>	<b>Module</b>	<b>Micro Content</b>
<b>Unit – I</b>	<b>Usability of Interactive Systems</b>	Introduction
		usability goals and measure
		usability motivations
		universal usability
		goals for our profession Managing
	<b>Guidelines – Principles – Theories</b>	Introduction to Guidelines, Principles and Theories
<b>Unit-II: Design Processes &amp; Direct Manipulation and Immersive Environments</b>		
<b>Unit</b>	<b>Module</b>	<b>Micro Content</b>
<b>Unit-II</b>	<b>Design Processes</b>	Introduction
		Organizational Support for design
		The Design Process, Design Framework
		Design Methods
		Design Tools
		Practices and patterns
		Social Impact Analysis
		Legal Issues
	<b>Direct Manipulation and</b>	Introduction
		Direct Manipulation

	Immersive Environments	Examples of Direct Manipulation
		2,D and 3,D Interfaces
		Teleportation and Presence
		Augmented and Virtual Reality
Unit-III: Fluid Navigation & Expressive Human and Command Languages		
Unit	Module	Micro Content
Unit-III	Fluid Navigation	Introduction
		Navigation by Selection
		Small Displays
		, Content Organization
		Audio Menus
		Form Fill-in
		Dialog Boxes
	Expressive Human and Command Languages	Introduction
		Speech Recognition
		Speech Production
		Human Language Technology
		Traditional Command Languages
Unit-IV: Devices & Advancing the User Experience		
Unit	Module	Micro Content
Unit –IV	Devices	Introduction to Keyboards and Keypads
		Pointing Devices
		Displays
	Advancing the User Experience	Introduction
		Display Design
		View (Window)
		Management – Animation
		Webpage Design
		Color
		Non-anthropomorphic Design
	Error Messages	
Unit	Module	Micro Content
Unit-V	User Documentation and Online Help	Introduction
		Online Vs Paper Documentation
		Reading from paper Vs from Displays
		Shaping the content of the Documentation
		Accessing the Documentation
		Online tutorials and animated documentation
		Online communities for User Assistance
		The Development Process