

COURSE TITLE : **HUMAN COMPUTER INTERACTION**
 COURSE CODE : **6264**
 COURSE CATEGORY : **E**
 PERIODS/WEEK : **5**
 PERIODS/SEMESTER : **75**
 CREDITS : **5**

TIME SCHEDULE

MODULE	TOPICS	PERIODS
1	Introduction to Human Computer Interaction	18
2	Human Interface Design	19
3	Windows and components	19
4	Software tools and Interaction devices	19

Course General Outcomes:

Sl.	G.O	On completion of this course the student will be able to :
1	1	To Understand Human Computer Interactions
	2	To Comprehend Graphical User Interface
2	1	To Understand the design process of Human Computer Interface
	2	To Understand screen designing
3	1	To understand windows
	2	To analyse the Components
4	1	To understand Software tools
	2	To analyse the usage of Interaction devices

Specific Outcomes:

MODULE – I: Introduction to cloud computing

1.1 Understand Human Computer Interactions

- 1.1.1 Define Human Computer Interaction.
- 1.1.2 Analyse importance of good design.
- 1.1.3 Discuss benefits of good design.
- 1.1.4 Discuss the history of screen design.

- 1.1.5 Explain general principles of HCI design.
- 1.1.6 Discuss Norman's principle of usability.

1.2 Comprehend Graphical User Interface

- 1.1.1 Discuss the popularity of graphics.
- 1.1.2 Explain the concept of direct manipulation.
- 1.1.3 Discuss graphical system.
- 1.1.4 Explain the characteristics of graphical user interface.
- 1.1.5 Discuss web user and its popularity.
- 1.1.6 Discuss principles of user interface.

MODULE – II: Human Interface Design

2.1 Understand the design process of Human Computer Interface

- 2.1.1 Explain Human interaction with computers
- 2.1.2 Explain the importance of human characteristics and considerations in design.
- 2.1.3 Discuss Human interaction speeds and its relation to business functions.

2.2 Understand screen designing

- 2.2.1 State design goals of screen designing.
- 2.2.2 Discuss screen planning and purpose.
- 2.2.3 Write about how to organizing screen elements.
- 2.2.4 Discuss the importance of ordering of screen data and content.
- 2.2.5 Describe screen navigation and flow.
- 2.2.6 Discuss importance of visually pleasing composition.
- 2.2.7 Discuss information retrieval on web.
- 2.2.8 Write about statistical graphics.
- 2.2.9 Analyse technological consideration in interface design.

MODULE – III: To understand Windows and components

3.1 To understand windows

- 3.1.1 Explain the Navigational schemes of windows.
- 3.1.2 Discuss selection of windows.
- 3.1.3 Brief the selection of devices based on screen based controls.

3.2 To analyse the Components

- 3.2.1 Describe text and message components.
- 3.2.2 Analyse importance of choosing colors.

MODULE – IV: Software tools and Interaction devices

4.1 To understand Software tools

- 4.1.1 Discuss software tools overview.
- 4.1.2 Describespecification methods.
- 4.1.3 Explaininterface building tools.
- 4.1.4 Discuss object oriented design and HCI.

4.2 To Analyse the usage of Interaction devices

- 4.2.1 Discuss the importance of interaction devices.
- 4.2.2 Explainpointing devices.
- 4.2.3 Discuss speech recognition digitalization and generation techniques.
- 4.2.4 Analyse image and video displays.
- 4.2.5 Define drivers.
- 4.2.6 Explain drivers.
- 4.2.7 Analyse emerging trends in user interface design.
- 4.2.8 Discuss Virtual Reality.

CONTENT DETAILS

MODULE I : Introduction to Human Computer Interaction

Human Computer Interaction– Introduction, Importance of user Interface – definition, importance of good design. Benefits of good design. A brief history of Screen design. Human Computer Interaction; General principles of HCI design. Norman’s principle of usability.

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

MODULE II : Human Interface Design

Design process – Human interaction with computers, importance of human characteristicsand human consideration, Human interaction speeds and understanding business functions.

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 – information retrieval on web – statistical graphics – Technological consideration in interface design.

MODULE III : Windows and components

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

Components – text and messages, Icons and Multimedia, colors, problems, choosing colors.

MODULE IV: Software tools and Interaction devices

Software tools – Specification methods, interface – Building Tools, Object-oriented design and HCI

Interaction Devices – Keyboard and function keys – pointing devices – speech recognition digitization and generation – image and video displays – drivers. Emerging trends in user interface design, Virtual reality

TEXT BOOK:

1. Wilbert O Galitz, *“The essential guide to user interface design”*, Wiley DreamaTech.
2. Ben Shneidermann , *“Designing the user interface. 3rd Edition”* , Pearson Education Asia.

REFERENCES:

1. Alan Dix, Janet Finckay, gregoryd, abowd, russellbealg, *“Human – Computer Interaction”*, Pearson publications.
2. Rogers, Sharps, *“Interaction Design”*, Wiley Dreamtech,
3. Soren Lauesen, *“User Interface Design”* Pearson Education.