**20CS4703C**

 **USER INTERFACE DESIGN**

**MICRO SYLLABUS**

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| **Offering****Branches** | CSE |
| **Course Category:** | PEC | **Credits:** | 3 |
| **Course Type:** | Theory | **Lecture-Tutorial- Practical:** | 3-0-0 |
| **Prerequisites:** | ------ | **Continuous Evaluation:** | 30 |
| **Semester End Evaluation:** | 70 |
| **Total Marks:** | 100 |
| **Course Outcomes** |
| Upon successful completion of the course, the student will be able to: |
| **CO1** |  Understand the concepts and principles of graphical user interface design | **L2** |
| **CO2** |

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| Apply concepts of interaction devices to identify appropriate devices for an application |

 | **L3** |
| **CO3** |

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| Analyze given scenario and apply screen elements and windows to design a screen |

 | **L4** |
| **CO4** |

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| Analyze human physical and mental limitations for using computers to provide solutions. |

 | **L4** |
| **Micro Content** |
| **Unit-I****Introduction to User Interface** | **Introduction to User Interface:** Defining the user interface and its importanceThe importance of Good designBenefits of Good designHistory of Screen design Characteristics of graphical and web user interfaces* Definition and importance of GUI
* Characteristics of graphical user interface
* Definition and importance of web user interface
* Characteristics of web user interface
* printed pages versus Web pages

Principles of user interface design * principles for the Xerox Star
* General Principles
 | CO1 |
| **UNIT-II** **Design Process** | **Design Process:** Understanding how people interact with computers* Why people have trouble with computers
* Responses to poor design
* People and their tasks

Human characteristics in DesignHuman Considerations in DesignHuman Interaction speedsOutline the methods for gaining an understanding of users. | CO1, CO4 |
| **UNIT-III****Screen Designing** | **Screen Designing:** Screen and Web Page Meaning and PurposeOrganizing screen elements clearly and meaningfullyOrdering of screen data and contentScreen navigation and flowVisually pleasing composition  Presenting information simply and meaningfully TypographyScreen Elements | CO1, CO3 |
| **UNIT-IV****Windows** **Components** | **Windows:**WindowCharacteristics Window Components Window Types Selection of proper device-based controlsSelection of proper screen based controls**Components:** Icons * Kinds of Icons
* Characteristics of Icons
* Influences on Icon Usability
* Choosing Icons

Images* Choosing Images
* Creating Images
* Drawing Images

Multimedia* Graphics
* Images
* Photographs/Pictures
* Video
* Diagrams
* Drawings
* Animation
* Audition

Color and its uses * Color-What is it?
* Color Uses
* Possible problems with color
* Choosing colors for categories of information
* Choosing colors for textual Graphic screens
* Choosing colors for statistical Graphic screens
* Choosing colors for Web pages
 | CO1, CO3 |
| **UNIT-V****Interaction devices** | **Interaction devices**Keyboards Keypadspointing devices* Direct control pointing devices
* Indirect control pointing devices
* Comparison of pointing devices

speech and Auditory Interfaces  | CO1, CO2 |

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| **Learning Resources** |
| **Text Book** |
| 1. ―The Essential Guide to User Interface Design- An Introduction to GUI Design Principles and Techniques‖, Wilbert O Galitz, 3rd Edition, Wiley Dreama Tech 2. Designing the User Interface. Ben Shneidermann, 5th Edition, Pearson Education Asia  |
| **References** |
| 1 Human Computer Interaction. Alan Dix, Janet Finlay, Goryd, Abowd, Russell Beal,3rd Edition, 2004, PEA. 2. User Interface Design. Soren Lauesen, Pearson Education. |
| **e-Resources and other Digital Material** |
| 1. http://iiscs.wssu.edu/drupal/node/4607 2. https://www.interaction-design.org/encyclopedia/human\_computer\_interaction\_hci.html  |

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