



Course Title: Human Computer Interaction

Course Level: UG

Course Code: CSIT325

Credit Units: 3

L	T	P/ S	SW/F W	TOTAL CREDIT UNITS
3	-	-	-	3

Course Objectives:

The objectives of the course are:

- The students are able to recognize the theories influencing Human Computer Interaction(HCI)
- The students are able to recognize how the requirements and challenges in developing computers with good level of HCI.
- The students think about how advanced computing facilities can be used to design one system which is capable of serving a large diverse population.

Pre-requisites: Knowledge of Fundamentals of Computers

Course Contents/Syllabus:

	Weightage (%)
Module I : Introduction	20%
Introduction to Interaction Design Input-Output channels, Human Memory thinking, Reasoning and Problem Solving Text entry devices, Positioning and pointing devices, Control and sensors, Printing and Scanning, Display devices Modes of Interaction, Interaction styles.	
Module II: Design Concepts Implementation	30%
Design, Process of Design, Screen Design and Layout, Iteration and Prototyping. Human Computer Interaction in the software process-The software life cycle, Usability Engineering, Iterative design and prototyping. Design Rules-Standards, Guidelines, Golden Rules and Heuristics. HCI Patterns Task Centered System Design User Centered Design and Prototyping Implementation Support-Programming the application, Using toolkits Universal design Principles.	
Module III : Evaluation	10%

Goals of Evaluation, Evaluation through Experts, Evaluation through users. Choosing an Evaluation method.	
Module IV : Models and Theories	30%
Cognitive Models, Challenges of using the Display based system Communication and Collaboration Models Task Decomposition, Knowledge Based Analysis, Dialog Notation and semantics. Standard Formalisms, Interaction Models, Modeling Interactions	
m which is capable	10%
Hypertext, Multimedia, World Wide Web. Advanced Computing techniques-Ubiquitous Computing	

Student Learning Outcomes:

After completion of this course, the student will be able to:

- Identify user requirements for HCI and challenges
- Apply the theories and principles to design new interaction concepts.
- Design and develop prototypes

Pedagogy for Course Delivery:

The subject will be taught with the help of

- Class room teaching in form of Lectures,
- Tutorial sessions including Question – Answer sessions, Assignments and Group Discussions.

Assessment/ Examination Scheme:

Theory L/T (%)	Lab/Practical/Studio (%)	End Term Examination
100%	-	100%

Theory Assessment (L&T):

Continuous Assessment/Internal Assessment					End Term Examination
Components (Drop down)	Attendance	Class Test	Assignment	Case Study	
Weightage (%)	5%	10%	5%	10%	70%

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Text and References:

- Dix A., Finlay J., Abowd G. D. and Beale R. *Human Computer Interaction*, 3rd edition, Pearson Education, 2005.
- Preece J., Rogers Y., Sharp H., Baniyon D., Holland S. and Carey T. *Human Computer Interaction*, Addison-Wesley, 1994.
- B. Shneiderman; *Designing the User Interface*, Addison Wesley 2000 (Indian Reprint).
- Dix A., Finlay J., Abowd G. D. and Beale R. *Human Computer Interaction*, 3rd edition, Pearson Education, 2005.
- Preece J., Rogers Y., Sharp H., Baniyon D., Holland S. and Carey T. *Human Computer Interaction*, Addison-Wesley, 1994.
- B. Shneiderman; *Designing the User Interface*, Addison Wesley 2000 (Indian Reprint).
- Selected research papers (details will be provided at the end of relevant materials).
- Jacob Nielsen; *Useability Engineering*; Morgan Kaufmann, Academic Press, London, 1993.