ITE1014	Human Computer Interaction	L	T	P	J	C
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Pre-requisite	**EEE1001**	**Syllabus version**				
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Course Objectives:

- To study the level of computer interaction of Human with computers.
- To understand the techniques and technologies available for the requirement gathering of interactive machines.
- To evaluate the tools and techniques for interactive system.

Expected Course Outcome:

1) Comprehend the concepts of Human computer interaction for computer utlizalition.
2) Understand the various input and output techniques for Human Computer interaction.
3) Understand the various input and output techniques for Human Computer interaction.
4) Explore the various tools for effective design and development of Human Computer Interaction systems.
5) Learn and understand the various testing strategies for Human Computer Interaction.
6) Explore the domain specific applications to gain knowledge to build Human Computer Interaction systems.
7) Understand and analyse the concepts of emerging phenomena in HCI.
8) Design and Develop an application which will address the contemporary issues.

Student Learning Outcomes (SLO):	**2, 6**

[2] Having a clear understanding of the subject related concepts and of contemporary issues

[6] Having an ability to design a component or a product applying all the relevant standards and with realistic constraints.

Module:1	**Humans in HCI:**	**6 hours**

Perceptual-Motor Interaction: Some Implications for Human–Computer Interaction, Human Information Processing: An Overview for Human–Computer Interaction, Mental Models in Human–Computer Interaction, Task Loading and Stress in Human–Computer Interaction, Choices and Decisions of Computer Users.

Module:2	**Computers in HCI:**	**6 hours**

Input Technologies and Techniques, Sensor- and Recognition-Based Input for Interaction, Visual Displays, Haptic Interface, Non-speech Auditory and Cross modal Output, Network-Based Interaction, Wearable Computers, Design of Fixed, Portable, and Mobile Information Devices

Module:3	**Requirements Specification:**	**7 hours**
User Experience Requirements Analysis within the Usability Engineering Lifecycle, Task Analysis, Contextual Design, Grounded Theory Method in Human–Computer Interaction and Computer-Supported Cooperative Work, An Ethnographic Approach to Design		
Module:4	**Design and Development:**	**7 hours**
Putting Personas to Work, Prototyping Tools and Techniques, Scenario-Based Design, Participatory Design		
Module:5	**Testing, Evaluation, and Technology Transfer:**	**6 hours**
Usability Testing, Usability for Engaged Users, Survey Design and Implementation in HCI, Inspection-Based Evaluations, Model-Based Evaluation		
Module:6	**Application-/Domain-Specific Design:**	**5 hours**
Human–Computer Interaction in Health Care, Motor Vehicle–Driver Interfaces, Human–Computer Interaction in Aerospace, Human–Computer Interaction for Kids		
Module:7	**Emerging Phenomena in HCI:**	**6 hours**
Augmenting Cognition in HCI, Social Networks and Social Media, Changing Human–Computer Interaction to Change the World, Ubiquitous Computing.		
Module:8	**Industry Expert Lecture**	**2 hours**
	Total Lecture hours:	**45 hours**

Text Book(s)

1.	Dr. Julie A Jacko, Human Computer Interaction Handbook: Fundamentals, Evolving Technologies, and Emerging Applications, Third Edition, CRC Press, Taylor and Francis Group, 2012.

Reference Books

1.	Sharp, Rogers, Preece, Interaction Design-Beyond Human Computer Interaction, Fourth Edition, Wiley, 2015.
2.	Don Norman, The Design of Everyday Things, Revised and Expanded Edition, Basic Books, Perseus Books Group, 2013.

Recommended by Board of Studies	05-03-2016		
Approved by Academic Council	No. 40	Date	18-03-2016