

Course Code	Course Name	Teaching Scheme (Hrs./Week)		Credits Assigned				
		Theory	Practical	Tutorial	Theory	Practical/Oral	Tutorial	Total
BEITC7055	Usability Engineering	04	02	---	04	01	---	05

Course Code	Course Name	Examination Scheme							
		Theory Marks				Term Work	Practical	Oral	Total
		Internal assessment			End Sem. Exam				
		Test 1	Test 2	Avg. of 2 Tests					
BEITC7055	Usability Engineering	20	20	20	80	25	---	25	150

**Course Objectives:**

Is to provide concrete advice and methods that can be systematically employed to ensure a high degree of usability in the final user interface.

**Course Outcomes:**

Students will be able to create useful usable and used interface.

**DETAILED SYLLABUS:**

<b>Sr. No.</b>	<b>Module</b>	<b>Detailed Content</b>	<b>Hours</b>
1	1	<b>Introduction</b> Cost Savings, Usability Now, Usability Slogans, Discount Usability Engineering, Recipe For Action, Usability and Other Considerations, Definition of Usability, Example: Measuring the Usability of Icons, Usability Trade-Offs, Categories of Users and Individual User Differences	<b>06</b>
2	2	<b>Generations of User Interfaces</b> Batch Systems, Line-Oriented Interfaces, Full-Screen Interfaces, Graphical User Interfaces, Next-Generation Interfaces, Long-Term Trends in Usability	<b>02</b>
3	3	<b>The Usability Engineering Lifecycle</b> Know the User, Competitive Analysis, Goal Setting, Parallel Design, Participatory Design, Coordinating the Total Interface, Guidelines and Heuristic Evaluation, Prototyping, Interface Evaluation, Iterative Design, Follow-Up Studies of Installed Systems, Meta-Methods, Prioritizing, Usability Activities.	<b>08</b>
4	4	<b>Usability Heuristics</b> Simple and Natural Dialogue, Speak the Users' Language, Minimize User Memory Load, Consistency, Feedback, Clearly Marked Exits, Shortcuts, Good Error Messages, Prevent Errors, Help and Documentation, Heuristic Evaluation.	<b>08</b>
5	5	<b>Usability Testing</b> Test Goals and Test Plans, Getting Test Users, Choosing Experimenters, Ethical Aspects of Tests with Human, Subjects, Test Tasks, Stages of a Test, Performance Measurement, Thinking Aloud, Usability Laboratories,	<b>08</b>
6	6	<b>Usability Assessment Methods beyond Testing</b> Observation, Questionnaires and Interviews, Focus Groups, Logging, Actual Use, User Feedback, Choosing Usability Methods.	<b>04</b>
7	7	<b>Interface Standards</b> National, International and Vendor Standards, Producing Usable In-House Standards. <b>International User Interfaces</b> International Graphical Interfaces, International Usability Engineering, Guidelines for	<b>08</b>

		Internationalization, Resource Separation, Multilocale Interfaces.	
8	8	<b>Future Developments</b> Theoretical Solutions, Technological Solutions, CAUSE Tools: Computer-Aided Usability Engineering, Technology Transfer	<b>04</b>

**Text Books:**

➤ Usability Engineering by Jacob Nielson, Morgan Kaufmann, Academic Press.

\* **eBook available**

**References:**

Developing User Interfaces - Ensuring Usability through Product & Process by Deborah Hix, Rex Hartson, Wiley

**Suggested Practical List (If Any): Refer appendix A of the text book for Practical Exercise.**

**Theory Examination:**

- Question paper will comprise of 6 questions, each carrying 20 marks.
- Total 4 questions need to be solved.
- Q.1 will be compulsory, based on entire syllabus where in sub questions of 2 to 3 marks will be asked.
- Remaining question will be randomly selected from all the modules.

Weight age of marks should be proportional to number of hours assigned to each module.