VIKASH INSTITUTE OF TECHNOLOGY, BARGARH

LESSON PLAN

Semester: 6th	**Year: 2025**	**Course:B.Tech**
	Sub:SOFTWARE ENGINEERING	**Total Credit:3**
Branch : CSE	**Sub Code : : RCS6C001**	
Name of the Faculty:	**SANJUKTA URMA**	
Designation :	**Lecturer**	
Department :	**Computer Science & Engineering**	
Session	**2024-25**	
Recommended Books	**Text book:**	
	1. "Computer Organization and Design: The Hardware/Software Interface", 5th Edition by David A. Patterson and John L. Hennessy, Elsevier.	
	2• "Computer Organization and Embedded Systems", 6th Edition by CarlHamacher, McGraw Hill Higher Education.	
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Sl. No.	Lecture No.	Topics to be covered	No. of Classes
		MODULE-1	
1	Lecture-01	Software Product, Software crisis	**8**
2	Lecture-02	Handling complexity through Abstraction and Decomposition	
3	Lecture-03	Overview of software development activities, Process Models	
4	Lecture-04	Cloud computing Reference model	
5	Lecture-05	Classical waterfall model, iterative waterfall model,	
6	Lecture-06	prototyping mode, evolutionary model,	
7	Lecture-07	spiral model, RAD model,	
8	Lecture-08	Agile models: Extreme Programming, and Scrum.	
		MODULE-2	
9	Lecture-09	Requirement Gathering and Analysis, Functional and	
10	Lecture-10	Non-functional requirements,	
11	Lecture-11	Software Requirement Specification (SRS), IEEE 830 guidelines	
12	Lecture-12	Decision tables and trees.	

13	Lecture-13	Structured Analysis & Design: Overview of design process	**11**
14	Lecture-14	High-level and detailed design, Cohesion and coupling,	
15	Lecture-15	Modularity and layering, Function–Oriented software design: Structured Analysis using DFD Structured Design using Structure Chart,	
16	Lecture-16	Basic concepts of Object Oriented Analysis & Design.	
17	Lecture-17	User interface design	
18	Lecture-18	Command language,	
19	Lecture-19	menu and iconic interfaces	
MODULE-3			
20	Lecture-20	Coding and Software Testing Techniques: Coding,	**8**
21	Lecture-21	Code Review, Testing: -Unit testing,	
22	Lecture-22	Black-box Testing, White-box testing,	
23	Lecture-23	Cyclomate complexity measure, coverage analysis	
24	Lecture-24	mutation testing, Debugging techniques,	
25	Lecture-25	Integration testing, System testing	
26	Lecture-26	Regression testing,Testing under Control	
27	Lecture-27	Software Reliability and Software	
MODULE-4			
28	Lecture-28	Basic concepts in software reliability,	11
29	Lecture-29	reliability measures, reliability growth	
30	Lecture-30	modeling,	
31	Lecture-31	Characteristics of software maintenance,	
32	Lecture-32	software reverse engineering,	
33	Lecture-33	software reengineering,	
34	Lecture-34	software reuse.	
35	Lecture-35	Emerging Topics: Client-Server Software	
36	Lecture-36	Engineering	
37	Lecture-37	Service-oriented Architecture (SOA)	
38	Lecture-38	Software as a Service (SaaS)	

Signature of Faculty Member **Signaturer Of HOD**

PRINCIPAL