



**SRINIVAS UNIVERSITY**  
**COLLEGE OF ENGINEERING & TECHNOLOGY**  
 Department Of Computer Science and Engineering  
**TEACHING/LESSON PLAN (EVEN Semester 2021-22)**

Subject Code		19SCS44	Title	SOFTWARE ENGINEERING			Class		IV SEM 'B'	
Prerequisites		SE			Faculty Name		Mrs. Shifana Begum			
Credits	04	Hours/week	L-T-P: 4-0-0		CIE Marks	50	SEE Marks	50	Total Hours	50

**Course Objectives:**

- Identify ethical and professional issues and explain why they are of concern to software engineers.
- Describe the process of requirements gathering, requirements classification, requirements specification and requirements validation.
- Differentiate system models, use UML diagrams and apply design patterns.
- Discuss the distinctions between validation testing and defect testing.
- Recognize the importance of software maintenance and describe the intricacies involved in software evolution.
- Apply estimation techniques, schedule project activities and compute pricing.
- Identify software quality parameters and quantify software using measurements and metrics.
- List software quality standards and outline the practices involved.
- Recognize the need for agile software development, describe agile methods, apply agile practices and plan for agility

**Course Outcomes of the Course:**

On Completion of this Course the Student was able to,

CO id	Course Outcome
CO1	Design a software system, component, or process to meet desired needs within realistic constraints.
CO2	Assess Professional and ethical Responsibility
CO3	Function on Multi disciplinary teams
CO4	Use the techniques, skills, and modern engineering tools necessary for engineering practice.
CO5	Analyze, design, implement, verify, validate, implement, apply, and maintain softwaresystems or parts of software systems

**CO-PO Mapping:**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2		2		2	2						
CO2								3				
CO3									1	1		
CO4	2	2			2							
CO5			3	2	2							

**Lesson/Teaching Plan of the Course:**

Hour No.	Plan Date	Actual Date	Topic to be covered	CO Mapping	Mode of Delivery	Text/ Reference book
1	21/3/22		<b>MODULE 1:</b> Software Crisis, Need for Software Engineering	CO1	Chalk & talk	T1
2	22/3/22		Professional Software Development, Software Engineering Ethics	CO1	Chalk & talk	T1
3	22/3/22		Case Studies. Software Processes: Models: Waterfall Model	CO1	Chalk & talk	T1

4	24/3/22		Incremental Model and Spiral Model:boehm Spiral Model	CO1	Chalk & talk	T1
5	28/3/22		Process activities, Requirements Engineering Processes	CO1	Chalk & talk	T1
6	29/3/22		Requirements Elicitation and Analysis	CO1	Chalk & talk	T1
7	29/3/22		Functional and Non Functional Requirements: Parameters and three types	CO1	Chalk & talk	T1
8	30/3/22		The software Requirements Document:	CO1	Chalk & talk	T1
9	4/4/22		Requirements Specification	CO1	Chalk & talk	T1
10	5/4/22		Requirements validation . Requirements Management	CO1	Chalk & talk	T1
11	5/4/22		<b>Module 2: System Models:</b> Context models	CO2	Chalk & talk	T1
12	7/4/22		Interaction models: use case modelling,sequence diagrams	CO2	Chalk & talk	T1
13	11/4/22		Structural models , Behavioral models:Data Driven Modeling,Event driven	CO2	Chalk & talk	T1
14	12/4/22		Model-driven engineering: MDA Transformation	CO2	Chalk & talk	T1
15	12/4/22		<b>Design and Implementation:</b> Introduction to RUP	CO2	Chalk & talk	T1
16	18/4/22		Design Principles: Multiple display,UML Model of observer pattern	CO2	Chalk & talk	T1
17	19/4/22		Object-Oriented design using the UML	CO2	Chalk & talk	T1
18	19/4/22		Design patterns:System Patterns and interactions,System context for weather station	CO2	Chalk & talk	T1
19	25/4/22		Implementation issues:Design and implementation	CO2	PPT, Chalk & talk	T1
20	26/4/22		Open source development, Open source licensing	CO2	PPT ,Chalk & talk	T1
21	26/4/22		<b>MODULE-3:</b> Development testing: input and output model of program testing, unit testing	CO3	PPT ,Chalk & talk	T1
22	28/4/22		Test-driven development; benefits of the methods	CO3	PPT	T1
23	2/5/22		Release testing: requirement based testing, scenario testing, performance testing	CO3	Chalk & talk	T1
24	5/5/22		User Testing: Acceptance test process(6 stages)	CO3	Chalk & talk	T1
25	9/5/22		Test Automation	CO3	Chalk & talk	T1
26	10/5/22		Software Evolution: Evolution processes: Spiral Model	CO3	Chalk & talk	T1
27	10/5/22		Program evolution dynamics: Software Evolution Process ,Change implementation, Emergency Repair process	CO3	Chalk & talk	T1
28	12/5/22		Software maintenance:3types of software maintenance,Development and Maintenance cost	CO3	Chalk & talk	T1
29	16/5/22		Software maintenance:Maintenance prediction,Reengineering process	CO3	Chalk & talk	T1
30	17/5/22		Legacy system management: four Strategic Operations,Issues,Clusters of system	CO3	Chalk & talk	T1
31	17/5/22		<b>MODULE 4: Project Planning:</b> Introduction Project plans and planning Process	CO4	PPT, Chalk & talk	T1

32	19/5/22		Software pricing	CO4	PPT Chalk & talk,	T1
33	23/5/22		Plan-driven development	CO4	Chalk & talk	T1
34	24/5/22		Project scheduling:process of scheduling	CO4	Chalk & talk	T1
35	24/5/22		Estimation techniques:two types,Algorithmic cost and COCOMO	CO4	chalk & talk	T1
36	27/5/22		<b>Quality management:</b> Software quality:Attributes,Process based quality	CO4	Chalk & talk	T1
37	30/5/22		Reviews and inspections:review process and inspections	CO4	Chalk & talk	T1
38	31/5/22		Software measurement:Predictor and control Measurements	CO4	Chalk & talk	T1
39	31/5/22		Software Metrics	CO4	Chalk & talk	T1
40	6/6/22		Software standards	CO4	Chalk & talk	T1
41	7/6/22		<b>MODULE 5: Agile Software Development: [INTRODUCTION]</b>	CO5	Chalk & talk	T1
42	7/6/22		Coping with Change	CO5	PPT, Chalk & talk	T1
43	9/6/22		The Agile Manifesto:Values and Principles.	CO5	PPT, Chalk & talk	T1
44	13/6/22		Agile methods: SCRUM	CO5	PPT, Chalk & talk	T1,T2
45	14/6/22		Extreme Programming	CO5	PPT, Chalk & talk	T1, T2
46	14/6/22		Plan-driven and agile development	CO5	PPT Chalk & talk,	T1, T2
47	16/6/22		Agile project management	CO5	PPT	T1, T2
48	20/6/22		Agile project management	CO5	Chalk & talk	T1, T2
49	21/6/22		Scaling agile methods	CO5	Chalk & talk	T1, T2
50	23/6/22		Scaling agile methods	CO5	Chalk & talk	T1, T2

**TEXT/REFERENCE BOOKS:**

T/R	BOOK TITLE/AUTHORS/PUBLICATION
T1	Ian Sommerville: Software Engineering, 9th Edition, Pearson Education, 2012
T2	The SCRUM Primer, Ver 2.0, <a href="http://www.goodagile.com/scrumpriemer/scrumpriemer20.pdf">http://www.goodagile.com/scrumpriemer/scrumpriemer20.pdf</a>
R1	1. Roger S. Pressman: Software Engineering-A Practitioners approach, 7th Edition, Tata McGraw Hill.

**Faculty Member**

Date:

**HOD**