

**SREE VIDYANIKETHAN ENGINEERING COLLEGE (Autonomous)**  
SREE SAINATH NAGAR, A. RANGAMPET – 517 102

**LESSON PLAN**

**Name of the Subject** : Software Development Methodologies (16MT12503)

**Class & Semester** : M. Tech, I - Semester

**Name(s) of the faculty Member(s):** Dr. K. Ramani

S. No.	Topic	No. of periods	Book(s) followed	Topics for self study
<b>UNIT – I</b>				
1.	Software Engineering, Software Process, Generic process model	2	T1	Distinguish between IceScrum and XPlanner Open source Agile Tools.  Ref. <a href="http://www.agile-tools.net/">www.agile-tools.net/</a>
2.	Prescriptive process model, specialized, unified process	3	T1	
3.	Agile development, Agile Process, Extreme Programming	2	T1	
4.	Other agile Process models	2	T1	
5.	Software engineering Knowledge, core Principles	2	T1	
6.	Principles that guide each framework Activity.	1	T1	
<b>Total periods required:</b>		<b>12</b>		
<b>UNIT – II</b>				
7.	Requirements Engineering, Establishing the Groundwork Requirements	2	T2	Develop Usecase diagrams for On-line Shopping System. Ref: <a href="http://www.tutorialspoint.com/uml/uml_use_case_diagram.htm">http://www.tutorialspoint.com/uml/uml_use_case_diagram.htm</a>
8.	Eliciting Requirements	1	T2	
9.	Developing use cases	1	T2	
10.	Building the requirements model	1	T2	
11.	Negotiating	1	T2	
12.	Validating	1	T2	
13.	Requirements Analysis	2	T2	
14.	Requirements Modeling Strategies.	1	T2	
<b>Total periods required:</b>		<b>10</b>		
<b>UNIT – III</b>				
15.	Design Process	2	T1	Discuss how to evaluate an Object Oriented design using Coupling and Cohesion.  <a href="http://www.cs.colorado.edu/">http://www.cs.colorado.edu/</a>
16.	Design concepts	2	T1	
17.	Object Oriented Design Concepts	2	T1	
18.	Design Model	2	T1	
19.	Design Techniques	2	T2	
20.	Summary of Design Techniques.	1	T2	
<b>Total periods required:</b>		<b>11</b>		
<b>UNIT – IV</b>				
21.	Structured coding Techniques	1	T2	Submit a report on Process and Product documentation.  <a href="http://ifs.host.cs.st-">http://ifs.host.cs.st-</a>
22.	Coding Styles	1	T2	
23.	Standards and Guidelines	1	T2	
24.	Documentation Guidelines	1	T2	
25.	Type checking	1	T2	

26.	User defined data types	1	T2	<a href="http://andrews.ac.uk/Books/SE9/Web/ExtraChaps/Documentation.pdf">andrews.ac.uk/Books/SE9/Web/ExtraChaps/Documentation.pdf</a>
27.	Data Abstraction	1	T2	
28.	Exception Handling	2	T2	
29.	Concurrency Mechanism	1	T2	
<b>Total periods required:</b>		<b>10</b>		
<b>UNIT – V</b>				
30.	Strategic Approach to software Testing, Strategic Issues	2	T1	How to design a cost model for Reuse for a system developed using Spiral Model. <a href="http://www.distance-college.com/Software%20Reuse.pdf">http://www.distance-college.com/Software%20Reuse.pdf</a>
31.	Testing Strategies for Conventional Software	1	T1	
32.	Object oriented software and Web Apps	1	T1	
33.	Validating Testing	1	T1	
34.	System Testing, Art of Debugging.	2	T1	
35.	Software Maintenance, Software Supportability	1	T1	
36.	Enhancing Maintainability during Development, Managerial Aspects of Software Maintenance, Configuration Management	1	T2	
37.	Reengineering, Business Process Reengineering	1	T2	
38.	Software Reengineering, Reverse Engineering, Restructuring	1	T2	
39.	Forward Engineering, Economics of Reengineering.	1	T2	
<b>Total periods required:</b>		<b>12</b>		
<b>Grand total periods required:</b>		<b>55</b>		

**TEXT BOOKS:**

- T1. Roger S. Pressman, "Software Engineering – A Practitioner's Approach," 7<sup>th</sup> Edition, Tata McGraw-Hill, 2009.
- T2. Richard Fairley, "Software Engineering Concepts," Tata McGraw Hill, 2008.

**REFERENCE BOOKS:**

- R1. Ian Sommerville, "Software Engineering," 7<sup>th</sup> Edition, Pearson Education Asia, 2007.
- R2. Shari Lawrence Pfleeger, Jaonne M. Atlee, "Software Engineering Theory and Practice," 3<sup>rd</sup> Edition, Pearson Education, 2006.