

**Bhoj Reddy Engineering College for Women: Hyderabad**

Department of Computer Science and Engineering

Lesson plan of faculty member for the academic year 2020–21

Class: III B Tech

Branch-Section: CSE-B

Semester: I

Subject: Software Engineering

Lectures per week: 3

Lecture Number	Topics to be covered	Date (s)
<b>UNIT-I: Introduction to Software Engineering, A Generic view of process, Process models</b>		
1	The evolving role of software	01-09-2020
2	Changing nature of software, software myths.	02-09-2020
3	Software engineering- a layered technology	04-09-2020
4	A process framework	08-09-2020
5	The capability maturity model integration (CMMI)	09-09-2020
6	process patterns, process assessment, personal and team process models	11-09-2020
7	The waterfall model, incremental process models	15-09-2020
8	Evolutionary process models	16-09-2020
9	The unified process, Revision	18-09-2020
<b>UNIT-II: Software Requirements, Requirements engineering process, System models</b>		
10	Functional and non-functional requirements, user requirements	22-09-2020
11	System requirements, interface specification	23-09-2020
12	The software requirements document, Feasibility studies	25-09-2020
13	Requirements elicitation and analysis	06-10-2020
14	Requirements validation, requirements management	07-10-2020
15	Context model, Behavioral models	09-10-2020
16	Data models, Object models	13-10-2020
17	Structured methods, Revision	14-10-2020
<b>UNIT-III: Design Engineering, Creating an architectural design</b>		
18	Design process and design quality, design concepts, the design model	16-10-2020
19	Software architecture, architectural styles and patterns, data design	27-10-2020
20	Architectural design, Revision	28-10-2020
21	conceptual model of UML, basic structural modeling	10-11-2020
22	class diagrams	11-11-2020
23	use case diagrams, sequence diagrams	13-11-2020
24	collaboration diagrams, Revision	17-11-2020
<b>UNIT-IV: Testing Strategies, Product metrics</b>		
25	A strategic approach to software testing, test strategies for conventional software	18-11-2020
26	black-box and white-box testing,	20-11-2020
27	validation testing	24-11-2020
28	System testing, the art of debugging.	25-11-2020
29	Software quality	27-11-2020
30	metrics for analysis model	01-12-2020
31	metrics for design model, metrics for source code	02-12-2020
32	metrics for testing	04-12-2020
33	metrics for maintenance, Revision	08-12-2020

<b>UNIT-V: Metrics for Process and Products, Risk management, Quality Management</b>		
34	Software measurement, metrics for software quality	09-12-2020
35	Reactive Vs proactive risk strategies, software risks	11-12-2020
36	risk identification, risk projection, risk refinement	15-12-2020
37	RMMM, RMMM plan	16-12-2020
38	Quality concepts, software quality assurance, software reviews	18-12-2020
39	Formal technical reviews, statistical software quality assurance	22-12-2020
40	Software reliability, the ISO 9000 quality standards	23-12-2020
41	Revision	29-12-2020
42	Revision	30-12-2020

#### **Text Books:**

1. Software Engineering, A practitioner's Approach- Roger S. Pressman, 6th edition, Mc Graw Hill International Edition.
2. Software Engineering- Sommerville, 7th edition, Pearson Education.
3. The unified modeling language user guide Grady Booch, James Rumbaugh, Ivar Jacobson, Pearson Education.

#### **Reference Books:**

1. Software Engineering, an Engineering approach- James F. Peters, Witold Pedrycz, John Wiley.
2. Software Engineering principles and practice- Waman S Jawadekar, The Mc Graw-Hill Companies.
3. Fundamentals of object-oriented design using UML Meiler page-Jones: Pearson Education.

Name and signature of the faculty: **Ms M Jhansi Rani** ----

Name and signature of Head of the Department: **Mr N Satyanandam** ----