

Sub Code / Sub Name: **IT18404 – Software Engineering Methodologies**
Unit : III

Unit Syllabus :

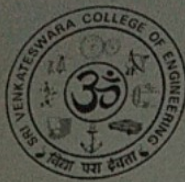
Architectural Design - Architectural design decisions-Architectural views-
Architectural patterns-Application architecture- User Interface Design: Interface
analysis, Interface Design. Introduction to Software Testing.

Objective: To learn about the architecture design, design decisions, views, patterns,
architecture and software testing.

Session No *	Topics to be covered	Ref	Teaching Aids
19	Architectural Design , Architectural design decisions	1-Ch.6;Pg (167-171) 3-Ch.9;Pg(255-260)	BB / PPT
20	Architectural views, Architectural patterns	1-Ch.6;Pg (173-175)	BB / PPT
21	Application architecture	1-Ch.6;Pg(164-175)	BB / PPT
22	User Interface Design	3-Ch.11;Pg (313-320)	BB / PPT
23	User Interface Design	3-Ch.11;Pg (321-328)	BB / PPT
24	Interface analysis,	3-Ch.11;Pg (329-334)	BB / PPT
25	Interface Design	3-Ch.11;Pg (335-342)	BB / PPT
26	Introduction to Software Testing	1-Ch.8;Pg (205-233)	BB / PPT
27	Introduction to Software Testing	1-Ch.8;Pg (239-249)	BB / PPT

Content beyond syllabus covered (if any):
Recent trends in software testing tools.

* Session duration: 50 minutes



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Unit : IV

Unit Syllabus:

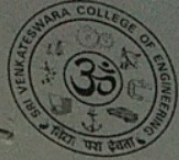
AGILE PRODUCT MANAGEMENT WITH SCRUM

Understanding product owner role - Envisioning the product - Working with product backlog - Planning the release.

Objective: To learn about Agile methods and techniques, agile product management in detail.

Session No *	Topics to be covered	Ref
28	Agile methods, Principles of Agile Methods	1-Ch.3;Pg(72 – 75)
29	Agile development techniques	1-Ch.3;Pg (75-78)
30	Agile project management	1-Ch.3;Pg (78 – 84)
31	Scaling agile methods	1-Ch.3;Pg (85 -88)
32	Understanding product owner role	2-Ch.1;Pg (1 - 19)
33	Desirable characters of product owner, working with team, collaborating with scrum master	2-Ch.1;Pg (11-19)
34	Working with product backlog	2-Ch.3;Pg (47-55)
35	The DEEP qualities of the product backlog, grooming the product backlog, discovering and	2-Ch.3;Pg (56-74)
36	Planning the release	2-Ch.4;Pg (75-96)
Content beyond syllabus covered (if any):		

* Session duration: 50 minutes



Department of Information Technology		LP: IT18404
B.E/B.Tech/M.E/M.Tech : <u>Information Technology</u>		Rev. No: 00
PG Specialisation : NA	Regulation: 2018	Date: 12/12/2019
Sub. Code / Sub. Name : IT18404 – Software Engineering Methodologies		
Unit : I		

Unit Syllabus:

SOFTWARE PROCESS AND SOFTWARE REQUIREMENT ANALYSIS

Generic process model, Process Assessment and Improvement, Prescriptive Process models, Specialized Process models, Personal and Team Process models. Software Requirements: Functional and Non-Functional, User requirements, System requirements, Software Requirements Document – Requirement Engineering Process: Feasibility Studies, Requirements elicitation and analysis, requirements validation, requirements management-

Objective:

To know about the basic concepts of software engineering, process life cycle models, Requirements engineering and Analysis activity.

Session No *	Topics to be covered	Ref	Teaching Aids
1	Introduction – Software, Types of Software - Generic process model, Process Assessment and Improvement	3-Ch.2;Pg (31-37)	LCD/BB
2	Prescriptive Process models, Specialized Process models	3-Ch.2;Pg (38-45)	LCD/BB
3	Specialized Process models	3-Ch.2;Pg (46-52)	LCD/BB
4	Personal and Team Process models	3-Ch.2;Pg (56-58)	LCD/BB
5	Software Requirements: Functional and Non-Functional, User requirements	1-Ch.4;Pg (82-84)	LCD/BB
6	System requirements, Software Requirements Document	1-Ch.4;Pg (85-90)	LCD/BB
7	Requirement Engineering Process	1-Ch.4;Pg (91-100)	LCD/BB
8	Feasibility Studies, Requirements elicitation and analysis	1-Ch.4;Pg (101-105)	LCD/BB
9	Requirements validation, requirements management	1-Ch.4;Pg (106-111)	LCD/BB

Content beyond syllabus covered (if any):

* Session duration: 50 minutes



Sub. Code / Sub. Name: IT18404 – Software Engineering Methodologies

Unit : II

Unit Syllabus :

SOFTWARE DESIGN

Classical analysis: Structured system Analysis, Petri Nets- Data Dictionary-System Modeling -Context models-Interaction models-Structural models-Behavioral models-Model driven engineering.

Objective:

To learn about different types of design models.

Session No *	Topics to be covered	Ref	
10	Classical analysis: Structured system Analysis	2-Ch.6;Pg (148-152)	LC
11	Structured System Analysis	2-Ch.6;Pg (153-157)	LC
12	Structured System Analysis	2-Ch.6;Pg (158-162)	LCL
13	Petri Nets- Data Dictionary	2-Ch.6;Pg (164-167)	LCL
14	System Modeling , Context models	1-Ch.5;Pg (118-120)	LCD
15	Interaction models, Structural models	1-Ch.5;Pg (124-129)	LCD
16	Behavioral models, ,	1-Ch.5;Pg (133-138)	LCL
17	Model driven engineering	1-Ch.5;Pg (139-145)	LCL
18	Model driven engineering	1-Ch.5;Pg (146-159)	LCL

Content beyond syllabus covered (if any):

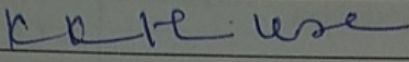
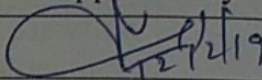
* Session duration: 50 mins

**TEXTBOOKS:**

1. Ian Sommerville, "Software Engineering", 10th Edition, Pearson Education Asia, 2016.
2. Roman Pichler, "Agile Product Management with Scrum Creating Products that Love", Pearson Education, 2012.

REFERENCES:

3. Roger S. Pressman, "Software Engineering – A Practitioner's Approach", Seventh Edition, Mc Graw-Hill International Edition, 2010.
4. Ken Schwaber, "Agile Project Management with Scrum", Microsoft Press, 2014".
5. Tilak Mitra, " Practical Software Architecture: Moving from System Context to Deployment", IBM press, 2016.

	Prepared by	Approved by
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Date	12-12-2019	12-12-2019
Remarks *:		
Remarks *:		

* If the same lesson plan is followed in the subsequent semester/year it should be mentioned and signed by the Faculty and the HOD