



SOCIETY OF ST. FRANCIS XAVIER, PILAR'S  
**FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING**

(Approved by AICTE & Affiliated to University of Mumbai)

Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050.

Phone : (022) 6711 4000, 6711 4101, 6711 4104

Website : [www.frcrce.ac.in](http://www.frcrce.ac.in) • Email : [crce@fragnel.edu.in](mailto:crce@fragnel.edu.in)

## Artificial Intelligence and Data Science (Academic Year :2023-2024)

<b>Course Code: CSC603</b>	
<b>Course Name: Software Engineering and Project Management</b>	
<b>Course Teacher: Prof. Nawal Dandekar</b>	
<b>Course Outcomes (CO): <i>At the End of the course students will be able to</i></b>	
CO.1	Relate to basic concepts in software engineering.
CO.2	Identify requirements, analyze and prepare models.
CO.3	Plan, schedule and track the progress of the projects.
CO.4	Design & develop the software solutions for the growth of society
CO.5	Apply testing and assure quality in software solutions
CO.6	Generate project schedule and can construct, design and develop network diagram for different type of Projects. They can also organize different activities of project



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## Course Lesson Plan

Semester date: 8<sup>th</sup> January 2024-19<sup>th</sup> April 2024

Unit Test 1: 05/2/24-07/2/24

Unit Test 2: 01/04/24-03/04/24

Sr. No.	Proposed Date	Topics	Delivery Mode	CO	Assessment Tool	Ref. book	Actual Date	Remark
1	08-01-2024	Introduction of students, Syllabus Discussion, Introduction to Software	Lecture	CO1	--			
2	10-01-2024	Nature of Software, Software Engineering, Software Process	Lecture	CO1	UT1, A1	T1		
3	12-01-2024	Capability Maturity Model (CMM) Generic Process Model,	Lecture	CO1	UT1, A1	T1		
4	15-01-2024	Prescriptive Process Models: The Waterfall Model ,V-model, Incremental Process Models	Lecture	CO1	UT1, A1	T1		
5	17-01-2024	Evolutionary Process Models,Concurrent Models	Lecture	CO1	UT1, A1	T1		
6	19-01-2024	Agile process, Agility Principles, Extreme Programming (XP)	Lecture	CO1	UT1, A1	T1		
7	22-01-2024	Scrum, Kanban model	Lecture	CO1	UT1,A1	T1		
8	24-01-2024	Software Requirements: Functional & non-functional-user-system requirement engineering process-feasibility studies- elicitation – validation & management	Lecture	CO2	UT1,A1	T1		
9	25-01-2024	software prototyping – S/W documentation – Analysis and	Lecture	CO2	UT1, A1	T1		



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		modelling Requirement Elicitation,						
10	29-01-2024	Software requirement specification (SRS), 3Ps (people, product and process) Process and Project metrics	Activity	CO2	UT1,A1	T1		
11	31-01-2024	Software Project Estimation: LOC, FP,	Lecture	CO2	UT1,A1	T1		
12	01-02-2024	Empirical Estimation Models - COCOMO II Model	Lecture	CO2	UT1,A1	T1		
13	08-02-2024	Design Process & quality, Design Concepts,		CO3	A1	T1		
14	12-02-2024	The design Model	Lecture	CO3	A1	T1		
15	14-02-2024	Pattern-based Software Design, Architectural Design :Design Decisions,	Lecture	CO3	A1	T1		
16	15-02-2024	Views, Patterns,		CO3	A1	T1		
17	21-02-2024	Application Architectures			A1	T1		
18	22-02-2024	Modeling Component level Design: component,Designing class based components			A1	T1		
19	26-02-2024	conducting component-level design,	Lecture	CO3	A1	T1		
20	28-02-2024	User Interface Design: The golden rules, Interface Design steps & Analysis, DesignEvaluation	Lecture	CO3	A1	T1		
21	29-02-2024	Risk Identification, Risk Assessment, Risk Projection,	Lecture	CO4	UT2	T1		
22	04-03-2024	RMMM Software Configuration management, SCM repositories,	Lecture	CO4	UT2	T1		
23	06-03-2024	SCM process Software Quality Assurance Task and Plan, Metrics, Software	Lecture	CO4	UT2	T1		
24	07-03-2024	Reliability, Formal Technical Review (FTR), Walkthrough.	Lecture	CO4	UT2	T1		



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25	07-03-2024	Quiz on Unit 3						
26	11-03-2024	Testing: Software Quality, Testing: Strategic Approach, Strategic Issues- Testing: Strategies for Conventional Software	Lecture	CO5	UT2	T1		
27	13-03-2024	Object oriented software, Web Apps Validating Testing- System Testing- Art of Debugging.	Lecture	CO5	UT2	T1		
28	14-03-2024	Maintenance : Software Maintenance-Software Supportability- Reengineering- Business Process Reengineering-	Lecture	CO5	UT2	T1		
29	20-03-2024	Software Reengineering- Reverse Engineering- Restructuring- Forward Engineering.	Lecture	CO5	UT2	T1		
30	21-03-2024	Introduction, 4 P's, W5HH Principle, Need for Project Management,	Lecture	CO6	A2	T1,T3		
31	27-03-2024	Project Life cycle and ITPM, Project Feasibility,	Lecture	CO6	A2	T1,T3		
32	28-03-2024	RFP, PMBOK Knowledge areas, Business Case	Lecture	CO6	A2	T1,T3		
33	04-04-2024	Project Planning, Project Charter and Project Scope.	Lecture	CO6	A2	T1,T3		
34	08-04-2024	Project Scheduling:Defining a Task Set for the Software Project,	Lecture	CO6	A2	T1,T3		
35	10-04-2024	Timeline chartsWBS, Developing the Project Schedule, Network Diagrams (AON, AOA),	Lecture	CO6	A2	T1,T3		
36	15-04-2024	CPM and PERT, Gantt Chart , Tracking the Schedule, Earned Value Analysis	Lecture	CO6	A2	T1,T3		

**Text Books :**

1. Roger S. Pressman, Software Engineering: A practitioner's approach, McGraw Hill
2. Rajib Mall, Fundamentals of Software Engineering, Prentice Hall India
3. John M. Nicholas, Project Management for Business and Technology, 3rd edition, Pearson Education.



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**Reference Books :**

1. Software Engineering : A Precise Approach|| Pankaj Jalote , Wiley India
2. Ian Sommerville — Software Engineering|| 9th edition Pearson Education SBN-13: 978-0- 13- 703515-1, ISBN-10: 0-13-703515-2
3. PankajJalote, An integrated approach to Software Engineering, Springer/Narosa.

**Course Instructor: Prof. Nawal Dandekar**