



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

(Approved by AICTE & Affiliated to University of Mumbai)

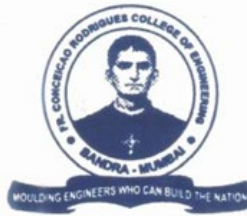
Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050.

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

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## Computer Engineering (Academic Year :2023-2024)

<b>Course Code: CSC502</b>	
<b>Course Name: SOFTWARE ENGINEERING</b>	
<b>Course Teacher: Dr. B. S. Daga</b>	
<b>Course Outcomes (CO): <i>At the End of the course students will be able to</i></b>	
CSC502.1	Recognize software requirements and evaluate various process models. (Understanding)
CSC502.2	Develop project Plan, schedule and track the progress of the given project (Applying)
CSC502.3	Formulate software project designs of the given project. (Creating)
CSC502.4	Conduct software project testing of the given project. (Applying)
CSC502.5	Analyze potential risks, implement changes, and ensure software project quality of the given project. (Analyzing)



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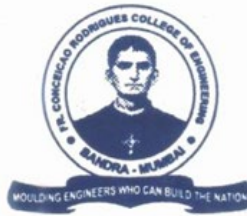
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## Course Lesson Plan

Sr. No.	Proposed Date	Actual Date	Topics	CO	Teacher's Remark	HoD's Remark
<b>Module 1: Introduction To Software Engineering and Process Models</b>						
1	11-07-23		Nature of Software, Software Engineering,	CO1		
2	12-07-23		Software Process, Capability Maturity Model (CMM)	CO1		
3	13-07-23		Generic Process Model,	CO1		
4	18-07-23		Prescriptive Process Models: The Waterfall Model,	CO1		
5	19-07-23		V-model, Incremental Process Models,	CO1	Question on Modules 1-2	
6	20-07-23		Evolutionary Process Models , Concurrent Models,	CO1	Question on Modules 1-2	
7	24-07-23		Agile process, Agility Principles, Extreme Programming (XP), Scrum, Kanban model	CO1		
<b>Module 2: Requirements Analysis and Modelling</b>						
8	25-07-23		Requirement Elicitation, Software requirement specification (SRS),	CO1	Question on Modules 1-2	
9	27-07-23		Developing Use Cases (UML)	CO1		
10	31-07-23		Requirement Model – Scenario-based model,	CO1		
11	01-08-23		Class-based model, Behavioral model.	CO1		
<b>Module 3: Project Scheduling and Tracking</b>						
12	03-08-23		Management Spectrum, 3Ps (people, product and process)	CO2		
13	07-08-23		Process and Project metrics	CO2	Quiz 1 on Modules 1-2	
14	08-08-23		<b>Software Project Estimation:</b> LOC, FP, Empirical Estimation Models - COCOMO II Model,	CO2		
15	10-08-23		Empirical Estimation Models - COCOMO II Model, Specialized Estimation Techniques	CO2		
16	14-08-23		<b>Project scheduling:</b> Defining a Task Set for the Software Project, Timeline charts,	CO2		



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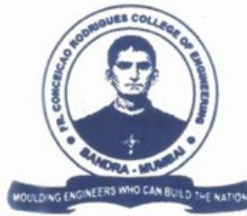
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	15-08-23		<b>Independence Day</b>			
	16-08-23		<b>Parsi New Year</b>			
17	17-08-23		Timeline charts, Tracking the Schedule,	CO2	<b>Guest Lecture</b>	
18	21-08-23		Earned Value Analysis	CO3	<b>Assignment 1</b>	
19	22-08-23		Design Principles, Design Concepts,	CO3		
20	24-08-23		Effective Modular Design – Cohesion and Coupling.	CO3		
21	28-08-23		Architectural Design	CO3	Quiz 2 on Modules 3-4	
	29-08-23 to 31-08-23		<b>Unit Test-1</b>			
22	04-09-23		Component-level design	CO3		
23	05-09-23		Component-level design	CO3		
24	07-09-23		User Interface Design	CO3		
25	11-09-23		Risk Identification, Risk Assessment,	CO5		
26	12-09-23		Risk Projection, RMMM	CO5		
27	14-09-23		Software Configuration management, SCM repositories, SCM process	CO5		
28	18-09-23		Software Quality Assurance Task and Plan,	CO5		
	19-09-23 to 22-09-23		<b>Shri Ganesh Festival</b>			
29	25-09-23		Metrics, Software Reliability,	CO5		
30	26-09-23		Formal Technical Review (FTR), Walkthrough.	CO5		
	28-09-23		<b>Anant Chaturdashi</b>			
<b>Module 6: Software Testing and Maintenance</b>						
31	03-10-23		Strategic Approach to Software Testing, Unit testing,	CO4		
32	05-10-23		Integration testing, Verification, Validation Testing, System Testing	CO4		
	09-10-23 to 13-10-23		<b>Unit Test-2</b>			
33	16-10-23		Software Testing Fundamentals, White-Box Testing ,	CO4	Quiz 3 on Modules 5-6	
34	16-10-23		Basis Path Testing, Control Structure Testing,	CO4		



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35	17-10-23	Black-Box Testing, Software maintenance and its types,	CO4		
36	17-10-23	Software Re-engineering, Reverse Engineering	CO4		
37	19-10-23	Problem solving and case study	CO5		
38	19-10-23	Remedial Session			
		<b>University ESE Examination</b>			

**Text books:**

1. T1. Roger Pressman, Software Engineering: A Practitioners Approach, (6th Edition), McGraw Hill, 2010
2. T2. Ian Somerville, Software Engineering, 9th edition, Addison Wesley, 2011

**Reference Books:**

1. R1. Eric J. Braude and Micheal E. Bernstein, Software Engineering Modern Approach, 2nd edition, Wiley, 2011.
2. R2. Ali Behforooz Fredrick Hudson, Software Engineering Fundamentals, Oxford University Press, 2006.
3. R3. Pankaj Jalote, "Integrated Software Engineering", Wiley.

**Course Instructor: Dr. B. S. Daga**