



Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	T	P	L	T	P	Total
CPC503	Structured and Object Oriented Analysis and Design	4	-	--	4	-	--	4
		Examination Scheme						
		ISE		MSE		ESE		
		10		30		100 (60% Weightage)		

Pre-requisite Course Codes	-
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At end of successful completion of this course, student will be able to

Course Outcomes	CO1	Understand the Concepts of System Development Life Cycle
	CO2	Apply techniques to get the system requirements and present it in standard format.
	CO3	Apply key modeling concepts to both the traditional structured approach and the object oriented approach.
	CO4	Construct the candidate system for the required system.

Module No.	Topics	Ref.	Hrs.
1	Introduction System overview, Types of Systems, Key Differences Between Structured and Object -Oriented Analysis and Design, Role of the System Analyst, Systems Development Life Cycle	1,2,3	06
2	System Analysis Business process Reengineering and the Zachman Framework, System Requirement, Stakeholders, Techniques for information gathering, Validating the requirements.	1,2,3	06
3	Feasibility Analysis Feasibility Analysis, Tests for feasibility, CostBenefit Analysis, Feasibility analysis of candidate system, The system Proposal.	1,2,3	06
4	Modeling System Requirements Traditional Approach to Requirement: Data Flow Diagrams ,Documentation of DFD Components. Information Engineering Models, Object Oriented Approach to Requirement: Object Oriented Requirements, The System Activities, Identifying Input and Outputs, Identifying Object Behavior, Integrating Object Oriented Models, Evaluating Alternatives for requirements, Environment and	1,2,3	12



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	Implementation		
5	System Design Moving To Design, The traditional Approach to design, The Object Oriented Approach to design: Use Case Realization, Designing Database, Designing the User Interface, Designing System Interfaces, Controls and security	1-11	12
6	Application Architecture IT Architecture, Application Architecture Strategies, Modeling, Application Architecture for Information System, Deployment using UML diagrams, Component and deployment diagram for various architectures.	1-11	06
Total			48

References:

- [1] Satzinger, Jackson and Burd, "System Analysis & Design" Cengage Learning, 2007
- [2] Jeffery I. Whitten, Lonnie D Bentley, "System Analysis and Design Methods", McGraw Hill, 7th edition.
- [3] Alan Dennis, Barbara H. Wixom, Roberta M. Roth, "System Analysis and Design", Wiley India 4th edition
- [4] Kendall & Kendall, "Systems Analysis and Design" PHI Publication, 7th Edition.
- [5] James a. Senn, "Analysis and Design of Information Systems", McGrawHill, 2nd Edition.
- [6] Michael Blaha, Jame Rumbaugh, "Object-Oriented Modeling and Design with UML" Pearson Education Publication, 2nd Edition.
- [7] Grady Booch, James Rumbaugh, Ivar Jacobson, "The Unified Modeling Language - User Guide" Pearson Education Publication.
- [8] Jeffrey A. Hoffer, Joey F. George, Joseph S. Valacich, Prabin K. Panigrahi, "Modern Systems Analysis and Design", Pearson Education Publication, 4th Edition.
- [9] UML Distilled by Martin Fowler, Pearson Edition, 3rd Edition.
- [10] Ali Bahrami, "Object Oriented Systems Development Using the Modified Modeling Language", Tata McGraw Hill Publication.
- [11] Applying UML and Patterns by Craig Larman, Pearson Education, 2nd Edition