

**SRINIVASA INSTITUTE OF ENGINEERING AND TECHNOLOGY****(UGC – Autonomous Institution)**

(Approved by AICTE, Permanently affiliated to JNTUK, Kakinada, ISO 9001: 2015 certified Institution)
(Accredited by NAAC with 'A' Grade; Recognised by UGC under sections 2(f) & 12(B))
NH-216, Amalapuram-Kakinada Highway, Cheyyeru (V), AMALAPURAM -533216.

OOAD

A.Y: 2024-25

YEAR: III

SEMESTER: II

COURSE SCHEDULE – AT A GLANCE

Name of the Faculty : B MANOHAR PRASAD

Name of the Course : OBJECT ORIENTED ANALYSIS AND DESIGN

Course Code : 21L05603

Branch : CSE (III CSE SECTION A)

The Schedule for the whole Course is:

Unit	Description	Duration (Date)		Total No. of Periods
		From	To	
1	Introduction: The Structure of Complex systems, The Inherent Complexity of Software, Attributes of Complex System, Organized and Disorganized Complexity, Bringing Order to Chaos, Designing Complex Systems. Case Study: System Architecture: Satellite-Based Navigation	26/12/2024	17/01/2025	15
2	Introduction to UML: Importance of modeling, principles of modeling, object oriented modeling, conceptual model of the UML, Architecture, and Software Development Life Cycle. Basic Structural Modeling: Classes, Relationships, common Mechanisms, and diagrams. Case Study: Control System: Traffic Management.	18/01/2025	07/02/2025	15
3	Class & Object Diagrams: Terms, concepts, modeling techniques for Class & Object Diagrams. Advanced Structural Modeling: Advanced classes, advanced relationships, Interfaces, Types and Roles, Packages. Case Study: AI: Cryptanalysis.	12/02/2025	15/03/2025	15
4	Basic Behavioral Modeling-I: Interactions, Interaction diagrams Use cases, Use case Diagrams, Activity Diagrams. Case Study: Web Application: Vacation Tracking System	19/03/2025	04/04/2025	13
5	Advanced Behavioral Modeling: Events and signals, state machines, processes and Threads, time and space, state chart diagrams. Architectural Modeling: Component, Deployment, Component diagrams and Deployment diagrams Case Study: Weather Forecasting	9/04/2025	26/04/2025	12

Total No. of Instructional periods available for the course: 70

LESSON PLAN

COURSE: OOAD

Unit No.	Topic	Plan		Actual		Teaching Methodology	Signature of the faculty
		No of hours	Date	No of hours	Date		
Unit-1	Introduction to Complex Systems	1	26/12/2024			Chalk &Talk /PPT	
	Defining & Structure of Complex Systems	2	27/12/2024			Chalk &Talk /PPT	
	The Inherent Complexity of Software	1	28/12/24			Chalk &Talk /PPT	
	Attributes of Complex Systems.	1	02/01/2025			Chalk &Talk /PPT	
	Organized Complexity & Disorganized Complexity	2	03/01/2025			Chalk &Talk /PPT	
	Comparing organized and Disorganized	1	04/01/25			Chalk &Talk /PPT	
	Bringing Order to Chaos	1	08/01/25			Chalk &Talk /PPT	
	Designing Complex Systems	1	09/01/25			Chalk &Talk /PPT	
	Designing systems with complex structures and interactions	2	10/01/2025			Chalk &Talk /PPT	
	Case Study: System Architecture of Satellite-Based Navigation	1	16/01/2025			Chalk &Talk /PPT	
	Components of Satellite-Based Navigation Systems	2	17/01/2025			Chalk &Talk /PPT	
	Introduction to UML	1	18/01/2025			Chalk &Talk /PPT	
	Importance of Modeling in Software Development	1	22/01/2025			Chalk &Talk /PPT	
	Principles of Modeling	1	23/01/2025			Chalk &Talk /PPT	
	Object-Oriented Modeling	2	24/01/2025			Chalk &Talk /PPT	
	Architecture in UML	1	25/01/2025			Chalk &Talk /PPT	
	modeling and the architectural design of systems.	1	29/01/2025			Chalk &Talk /PPT	
	Role of UML in the Software Development.	1	30/01/2025			Chalk &Talk /PPT	

Unit-2	Basic Structural Modeling in UML & Classes in UML	2	31/01/2025			Chalk &Talk /PPT	
	Relationships in UML	1	01/02/2025			Chalk &Talk /PPT	
	Common Mechanisms in UML	1	05/02/2025			Chalk &Talk /PPT	
	UML Diagrams for Structural Modeling	1	06/02/2025			Chalk &Talk /PPT	
	Case Study: Control System – Traffic Management	2	07/02/2025			Chalk &Talk /PPT	
Unit-3	Introduction to Class & Object Diagrams	1	12/02/2025			Chalk &Talk /PPT	
	Object Diagrams in UML modeling	1	13/02/2025			Chalk &Talk /PPT	
	Modeling Techniques for Class Diagrams	2	14/02/2025			Chalk &Talk /PPT	
	Modeling Techniques for Object Diagrams	1	15/02/2025			Chalk &Talk /PPT	
	Class Diagrams:Structure and Representation	1	19/02/2025			Chalk &Talk /PPT	
	Object Diagrams: Structure and Representation	1	20/02/2025			Chalk &Talk /PPT	
	Advanced Classes Relationships in UML	2	21/02/2025			Chalk &Talk /PPT	
	Interfaces in UML	1	22/02/2025			Chalk &Talk /PPT	
	Types and Roles in UML	1	06/03/2025			Chalk &Talk /PPT	
	Packages in UML & Advanced Structural Modeling Techniques	2	07/03/2025			Chalk &Talk /PPT	
	Case Study: AI in Cryptanalysis	1	13/03/2025			Chalk &Talk /PPT	
	Applying Class & Object Diagrams to AI Cryptanalysis	1	15/03/2025			Chalk &Talk /PPT	
Unit-4	Introduction to Basic Behavioral Modeling	1	19/03/2025			Chalk &Talk /PPT	
	Understanding Interactions in Behavioral Modeling	1	20/03/2025			Chalk &Talk /PPT	
	Interaction Diagrams & Sequence Diagrams in Interaction Modeling	2	21/03/2025			Chalk &Talk /PPT	
	Collaboration Diagrams in Interaction Modeling	1	22/03/2025			Chalk &Talk /PPT	
	Use Cases in Behavioral Modeling	1	26/03/2025			Chalk &Talk /PPT	

	Use Case Diagrams How use case diagrams	1	27/03/2025			Chalk &Talk /PPT	
	Actors and System Boundaries in Use Case Diagrams	2	28/03/2025			Chalk &Talk /PPT	
	Control Flow and Data Flow in Activity Diagrams	1	29/03/2025			Chalk &Talk /PPT	
	Case Study: Web Application – Vacation Tracking System	1	02/04/2025			Chalk &Talk /PPT	
	Applying Behavioral Modeling to the Vacation Tracking System	1	03/04/2025			Chalk &Talk /PPT	
	Activity diagrams to model the behavior	2	04/04/2025			Chalk &Talk /PPT	
Unit-5	Introduction to Advanced Behavioral Modeling & Events and Signals	1	09/04/2025			Chalk &Talk /PPT	
	State Machines in Behavioral Modeling	1	10/04/2025			Chalk &Talk /PPT	
	Processes and Threads in Behavioral Modeling	2	11/04/2025			Chalk &Talk /PPT	
	State chart Diagrams in Behavioural Modelling	1	16/04/2025			Chalk &Talk /PPT	
	Introduction to Architectural Modelling	1	17/04/2025			Chalk &Talk /PPT	
	Component Modelling in Architecture	1	19/04/2025			Chalk &Talk /PPT	
	Deployment Modeling in Architecture	1	23/04/2025			Chalk &Talk /PPT	
	Component Diagrams in Architectural Modeling	1	24/04/2025			Chalk &Talk /PPT	
	Deployment Diagrams in Architectural Modeling	2	25/04/2025			Chalk &Talk /PPT	
	Case Study: Weather Forecasting System	1	26/04/2025			Chalk &Talk /PPT	

Text Books:

1. Grady BOOCH, Robert A. Maksimchuk, Michael W. ENGLE, Bobbi J. Young, Jim Conallen, Kellia Houston , “Object- Oriented Analysis and Design with Applications”, 3rd edition, 2013, PEARSON.
2. Grady Booch, James Rumbaugh, Ivar Jacobson: The Unified Modeling Language User Guide, Pearson Education.

Reference Books:

1. Meilir Page-Jones: Fundamentals of Object Oriented Design in UML, Pearson Education.
2. Pascal Roques: Modeling Software Systems Using UML2, WILEY- Dreamtech India Pvt. Ltd.

Faculty**HOD****Dean-Academics****Principal**