



C. U. SHAH UNIVERSITY
Wadhwan City

FACULTY OF:- Computer Science

DEPARTMENT OF:- Master of Computer Applications

SEMESTER:- -II

CODE:- - 5CS02MSE1

NAME:- – SOFTWARE ENGINEERING (SE)

Teaching and Evaluation Scheme

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5CS02MSE1	SOFTWARE ENGINEERING (SE)	4	0	0	4	4	30	1.5	70	3	---	---	---	100

Objectives:

- To be able to understand the concepts of Designing Software.

Prerequisites:

- Knowledge of Basic System Analysis and Design

Course outline:-

Sr. No.	Course content	No. of Hours
1	Introduction to Software Engineering, Process and Process Models Introduction to Software Engineering, Evolving Role of Software, Legacy Software. A Layered Technology, A Process Frame Work, The Process Pattern. Prescriptive Models, The Waterfall Model, V-Model, The RAD Model, Incremental Model , Spiral Model , Prototype Model , Component-Based Development model	10
2	Requirements Engineering Problem Recognition, Requirement Engineering tasks, Processes, Requirements Specification, Use cases and Functional specification, Requirements validation, Requirements Analysis, Modeling – Data Modeling, Behavioral Modeling	10
3	Object Oriented Analysis and Design Object Oriented Analysis Concept, Domain Analysis, Generic Concept of Object Oriented Analysis Model, Object Oriented Analysis Process, Object Relationship Model, Object Behavior Model. Design of Object Oriented System, The System Design Process, Object Design and System Design Process	10
4	Testing Strategies and Tactics A Strategic Approach to Software Testing (Verification and Validation) Strategic Issues, Validation Testing (Criteria, Configuration Review, alpha and beta Testing), The art of Debugging (Debugging Process, Strategies, Correcting the Error) , Software Testing	10



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	Fundamentals, Black Box and White Box Testing, Object Oriented Testing Methods.	
5	Clean Room Software Engineering and Component Base Software Engineering The Clean Room Approach, Functional specification, Clean room specification, Clean room design, Clean room testing, Engineering of component based systems, The component based software engineering process, Domain engineering, Component based development Classifying and Retrieving Components	08
	Total hours	48

Learning Outcomes:

- He/She should be able to understand and appreciate the Web Technology.
- He/She should be aware of the working and architectural Web Site.
- He/She should be able to solve problems given to him/her using PHP efficiency.

Books Recommended:

- “Software Engineering – A practitioner’s Approach”, **Roger S. Pressman**. 6th Edition.
- “Object Oriented Analysis and Design” **Gooch**
- “Fundamentals of Software Engineering”, **Rajib Mall**.