C. U. SHAH UNIVERSITY
Wadhwan City

FACULTY OF:-Computer Science
DEPARTMENT OF:-B. Sc. (CA & IT)
SEMESTER:- V
CODE: - 4CS05SWE1
NAME: – Software Engineering – I

Teaching and Evaluation Scheme

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
							Theory				Practical (Marks)			
							Sessional Exam		University Exam		Internal		University	Total
		Th	Tu	Pr	Total		Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
4CS05SWE1	Software Engineering – I	5	0	0	5	5	30	1.5	70	3.0	100	30	20	50

Course outline:-

Sr. No.	Course content	Hours
1	**Introduction to Software Engineering** Introduction of Software, The changing nature of software, Program Vs. Software Products.	8
2	**A Generic view of Process & its model.** Software engineering – a layered technology, The waterfall model, RAD Model, Prototyping Model, Spiral Model	7
3	**Building the analysis model** Elements of analysis model, Requirement analysis, Data modeling concept, Object oriented analysis, What is component?, Cohesion and Coupling	10
4	**Testing Tactics** Software testing fundamentals, Verification and Validation, Unit testing, System testing, Black box testing,White box testing, Control structure testing	12
5	**Software Project Management** a) Project Planning b) Metrics for Project size estimation: LOC, FP c) COCOMO Model d) Scheduling. (ε) Work break down structure. Activity network & critical path method., Gantt Chart Risk Management:, Risk identification, Risk containment, Risk assessment	13
	TOTAL	**50**

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Teaching & Learning Methodology:
- Using Whiteboard & Multimedia or OHP

Books Recommended:
1. Software Engineering – A Practitioner's Approach, by Roger S. Pressman McGrawHill
2. Fundamentals of Software Engineering, by Rajib Mall, PHI Publication"