CSE 3005		Software Engineering						L	T	P	C
Version		School	SCSE	Date of Approval				3	0	2	4
Total Number of Contact Hours						L	45	T	0	P	30
Pre-requisites											
Alternate Exposure											
Co-requisites											

Course Outcomes	1	Understand the different process models
	2	Analyze the user requirements and design an application using software engineering concepts
	3	Evaluate the quality of the application
	4	
	5	
Specific Instructional Objectives	1	To understand the software process models such as the waterfall and evolutionary models to agile models
	2	To understand the software requirements and the SRS document
	3	To learn design concepts and various implementation issues such as modularity and coding standards.
	4	To understand the software testing approaches such as unit testing and integration testing
Catalog Description		
Text Books	1	Ian Sommerville, "Software Engineering", Addison-Wesley, 2011.
	2	Srinivasan Desikan, Gopalaswamy Ramesh"Software Testing: Principles and Practices" Pearson Education 2007.
	3	See more at: http://www.pearsonhighered.com/educator/product/Software-Testing- Principles-and-Practices/9788177582956.page#sthash.QYOLLBEJ.dpuf
	4	
Reference Books	1	Official website of R.S. Pressman for Software Engineering http://www.rspa.com/index.html
	2	NPTEL website of IIT Kharagpur http://www.nptel.ac.in/courses/Webcourse-contents/IIT Kharagpur/Soft Engg/New_index1.html
	3	
	4	

Signature of BOS Chairman

Approved by ____ Academic Council

Unit 1	SOFTWARE PROCESS and MODELS			Number of Lecture Hours	9
	The Nature Of Software, Software Engineering, Software Process - Software Myths - Process Models – Generic –Perspective – Specialized – The Unified Process – Personal And Team Software Process - Agile Development – Agile Process- Extreme Programming - Software Engineering Knowledge – Core Principles				
Pedagogy tools	Scaleup	Lecture			
Unit 2	REQUIREMENT ENGINEERING			Number of Lecture Hours	9
	Understanding Requirements – Establish Ground Work – Eliciting Requirements - Developing Use case- Negotiating Requirements- Validating Requirements - Requirements Modeling – Requirement Analysis –Scenario Based Modeling - UML Supplements – Data Modeling Concepts- Class Based Modeling - Flow Oriented Modeling – Creating Behavioral Modeling - Patterns For Modeling.				
Pedagogy tools	Scaleup	Lecture			
Unit 3	DESIGN CONCEPTS			Number of Lecture Hours	9
	The Design Process- Design Concepts- Design Model - Software Architecture -Architectural Styles – Alternatives - Mapping To DFD - Component Based Development and Design - User Interface Design : Interface Analysis , Interface Design.				
Pedagogy tools	Scaleup	Lecture			
Unit 4	IMPLEMENTATION AND TESTING			Number of Lecture Hours	9
	Software Implementation Techniques: Coding Practices – Refactoring - Software Testing Fundamentals - Types of Testing: Unit, Integration and System testing - Testing Strategies: Black box and White box testing - System testing and debugging.				
Pedagogy tools	Scaleup	Lecture			
Unit 5	SOFTWARE MANAGEMENT AND PROCESS IMPROVEMENT			Number of Lecture Hours	9
	The SCM Process - Project Management Concepts- The Management Spectrum – People- Process- Product- W5HH Principle - Software Reengineering – Reverse Engineering - Software Process Improvement – SPI Process – CMMI – Other SPI Framework - Scheduling and Tracking.				
Pedagogy tools	Scaleup	Lecture			

Signature of BOS Chairman

Approved by ____ Academic Council