Course code: Course Title	Course Structure			Pre-Requisite
SE307: Software Requirement Engineering	L	T	P	Software Engineering
	3	1	0	

Course Objective: Understand the fundamentals of software requirement engineering, management, tools and latest trends.

S. NO	Course Outcomes (CO)
CO1	Understand fundamentals of software requirements, best practices in requirements engineering, and risk management.
CO2	Analyze various activities used for requirements engineering.
CO3	Apply requirements management principles, including change management, requirements traceability, and maintaining links in the requirements chain.
CO4	Demonstrate requirements management tools such as Rational Requisite Pro and Caliber RM.
CO5	Explore and assess advanced requirement engineering techniques.

S. NO	Contents	Contact Hours
UNIT 1	**Software Requirements:** Essential of Software requirements, Different Dimensions of Software Requirements, Good practices for requirements engineering, improving requirements processes, and risk management.	8
UNIT 2	**Requirements Engineering:** Review of various activities of Requirements Engineering like requirements elicitation, requirements analysis, documentation & review. Discussion on current trends in requirements elicitation, requirements analysis models and verifying requirements, requirements specification & requirements prioritization.	8
UNIT 3	**Requirements Management (RM):** Principles and practices of RM, Requirements attributes, Change Management Process, Requirements Traceability Matrix, Links in requirements chain.	8
UNIT 4	**RM Tools:** Rational Requisite pro, Caliber RM, benefits of using a RM tool.	5
UNIT 5	**Advances in Requirement Engineering:** Commercial requirements management techniques & tools, implementing requirements management automation.	7
UNIT 6	**Application:** Latest trends in requirements engineering such as aspect-oriented requirement engineering, agent-based requirement engineering.	6
	TOTAL	42

REFERENCES

S.No.	Name of Books/Authors/Publishers	Year of Publication / Reprint
1	Swapna Kishore, Rajesh Naik, "Software Requirements and Estimation", McGraw Hill Education.	2017
2	Karl Wiegers, Joy Beatty, "Software Requirements (Microsoft Press)", Wiley, 3rd Edition.	2013
3	Ellen Gottesdiener, "Requirements by Collaboration: Workshops for Defining Needs", Addison-Wesley Educational Publishers Inc, 1st Edition.	2002

4	Ian Graham, "Requirements Engineering and Rapid Development: An object-oriented approach", Addison Wesley.	**1998**
5	Ivy F. Hooks, Kristin A. Farry, "Customer-Centered Products: Creating Successful Products Through Smart Requirements Management", Amacom.	**2000**
6	Dean Leffingwell, Don Widrig, "Managing Software Requirements: A Unified Approach", Addison Wesley, 1st Edition.	**1999**