SOFTWARE REQUIREMENTS MANAGEMENT

(Professional Elective – I)

Course Code	20IT4501C	Year	III	Semester	I
Course Category	PE-I	Branch	IT	Course Type	Theory
Credits	3	L-T-P	3-0-0	Prerequisites	Software Engineering
Continuous Internal Evaluation :	30	Semester End Evaluation:	70	Total Marks:	100

	Course Outcomes	Blooms Taxonomy Level
Upon Successful completion of course, the student will be able to		
CO1	Understand software requirements and estimation according to industry standards	L2
CO2	Apply the concepts of requirement elicitation, specifications and management	L3
CO3	Use the concepts of requirement management in real scenarios	L3
CO4	Analyze the concepts of software size estimation.	L4

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)													
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**
CO1	3												3	
CO2	3					3							3	
CO3	3					3							3	
CO4		3				3							3	

Syllabus		
Unit No	**Contents**	**Mapped CO**
I	**Introduction:** requirements, requirement engineering, requirements document, best way to write requirements, detailed requirements, difference between functional and nonfunctional requirements, system stakeholders, requirements engineering process, recognizing requirements engineering process problems suggesting a good requirements engineering process. Practical process improvement: Process maturity, process assessment, process improvement, top ten guidelines.	**CO1**
	Requirements Elicitation: Assess system feasibility, identify and consult system stakeholders, record requirement sources, system's operating	**CO1**

II	environment, using business concerns to drive requirements elicitation, domain constraints, collect requirements from multiple view points, use scenarios to elicit requirements, operational process. Requirements Analysis and Negotiation: System boundaries prioritize requirements, assess requirements risk.	CO2
III	**Describing Requirements**: Standard templates use language, use diagrams, supplement natural language requirements, specifying requirements quantitatively.	CO1 CO2
IV	**Requirements Management**: Uniquely identify each requirement, policies for requirements management, traceability policies, maintaining a traceability manual, change management policies, identify global system requirements, identify volatile requirements, record rejected requirements.	CO1 CO2
V	**Software Size Estimation**: Software estimation, size based estimation, two views of sizing, function point analysis, mark IIFPA, full function points, loc estimation and conversion between size measures.	CO1 CO4

Learning Resources
Text Books
1. Ian Sommerville and Pete Sawyer, Requirements Engineering: A good practice guide, John Wiley, 1997.   2. RajeshNaik, SwapnaKishore, Software Requirements and Estimation,TMH,2001.
References
1. Don, Managing Software Requirements, A Use Case Approach, 2/e, Dean, Addison-Wesley,2003.   2. Ian Graham, Requirements Engineering and Rapid Development, AddisonWesley,1998   3. S.Robertson , J.Robertson, Mastering the Requirements Process, 2/e, Pearson, 2006
E-Resources and other Digital Material   1. Requirements Engineering / Specification, NPTEL