



R21 Regulations

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF COMPUTER APPLICATIONS

Course Code	DEVOPS & AGILE PROGRAMMING	L	T	P	C
21F00303		4	0	0	4
Semester		III			
Course Objectives:					
<ul style="list-style-type: none"> • To give strong knowledge of Agile practices • To give strong foundation of applications of DevOps • To give strong foundation of development and its operations • To give strong foundation of the source code management 					
Course Outcomes (CO): Student will be able to					
<ul style="list-style-type: none"> • Understand the traditional software development. • Learn the rise of agile methodologies. • Define and design purpose of DevOps • Understand applied DevOps. • Learn real world applications of DevOps. • Understand its practical examples. 					
UNIT - I		Lecture Hrs:			
Why Agile? , How to be Agile, Understanding XP, Values and Principles, Improve the Process, Eliminate Waste, Deliver Value. Practicing XP-Thinking, Pair Programming, Energized Work, Informative Workspace, Root-Cause Analysis, Retrospectives, Collaborating, Sit Together, Real Customer Involvement, Ubiquitous Language, Stand-Up Meetings, Coding Standards, Iteration Demo, Reporting.					
UNIT - II		Lecture Hrs:			
Releasing-Done Done, No Bugs, Version Control, Ten-Minute Build, Continuous Integration, Collective Code Ownership, Documentation. Planning-Vision, Release Planning, Risk Management, Iteration Planning, Stories, Estimating.					
UNIT - III		Lecture Hrs:			
Developing-Incremental Requirements, Customer Tests, Test Driven Development, Refactoring, Incremental Design and Architecture, Spike Solutions, Performance Optimization.					
UNIT - IV		Lecture Hrs:			
DEFINITION & PURPOSE OF DEVOPS: Introduction to DevOps - DevOps and Agile, Minimum Viable Product - Application Deployment - Continuous Integration - Continuous Delivery					
UNIT - V		Lecture Hrs:			
CAMS (CULTURE, AUTOMATION, MEASUREMENT AND SHARING): CAMS – Culture - CAMS – Automation - CAMS – Measurement - CAMS – Sharing - Test Driven Development - Configuration Management - Infrastructure Automation - Root Cause Analysis - Blamelessness - Organizational Learning.					
Text Books:					
<ol style="list-style-type: none"> 1. James Shore and Shane Warden, “ The Art of Agile Development”, O’REILLY, 2007 2. Robert C. Martin, “Agile Software Development, Principles, Patterns, and Practices”, FHM, 2002. 3. The DevOps Handbook - by Gene Kim, Jez Humble, Patrick Debois, and Willis Willis 4. What is DevOps? - by Mike Loukides 5. The DevOps Handbook - by John Willis, Patrick Debois, Jez Humble, Gene Kim. 6. DevOps: A Software Architect’s Perspective - by Len Bass, Ingo Weber, Liming Zhu. 					