

Institute/Department	UNIVERSITY INSTITUTE OF COMPUTING (UIC)	Program	Master of Computer Applications (MC305)
Master Subject Coordinator Name:	Ajay Yadav	Master Subject Coordinator E-Code:	E13382
Course Name	Agile Methodology	Course Code	24CAT-656

Lecture	Tutorial	Practical	Self Study	Credit	Subject Type
3	0	0	0	3.00	T

Course Type	Course Category	Mode of Assessment	Mode of Delivery
Major Core	Graded (GR)	Theory Examination (ET)	Theory (TH)

Mission of the Department	M1. To provide innovative learning centric facilities and quality-oriented teaching learning process for solving computational problems. M2. To provide a framework through Project Based Learning to support society and industry in promoting a multidisciplinary activity. M3. To develop crystal clear evaluation system and experiential learning mechanism aligned with futuristic technologies and industry. M4. To provide doorway for promoting research, innovation and entrepreneurship skills in collaboration with industry and academia. M5. To undertake societal activities for upliftment of rural/deprived sections of the society.
Vision of the Department	To be a Centre of Excellence for nurturing computer professionals with strong application expertise through experiential learning and research for matching the requirements of industry and society instilling in them the spirit of innovation and entrepreneurship.

--

--

--

Text Books					
Sr No	Title of the Book	Author Name	Volume/Edition	Publish Hours	Years
1	Agile Software Development with SCRUM (Series in Agile Software Development)	Ken Schwaber (Author), Mike Beedle (Author)	1st	Pearson	2002
2	Agile Software Development, Principles, Patterns, and Practices (Alan Apt Series)	Robert Martin (Author)	1st	PHI	2002

Reference Books					
Sr No	Title of the Book	Author Name	Volume/Edition	Publish Hours	Years
1	Agile Testing: A Practical Guide for Testers and Agile Teams (Addison-Wesley Signature Series (Cohn))	Lisa Crispin (Author), Janet Gregory (Author)	1st	Addison-Wesley	2009
2	Agile Software Development: The Cooperative Game	Alistair Cockburn (Author)	1st	Addison Wesley	2006

Course OutCome	
SrNo	OutCome
CO1	Interpret the concept of agile software engineering and its advantages in software development.
CO2	Analyze the core practices behind several specific agile methodologies.
CO3	Access implications of functional testing, unit testing, and continuous integration
CO4	Determine the role of design principles in agile software design.
CO5	Make use of various tools available to agile teams to facilitate the project.

Lecture Plan Preview-Theory						
Unit No	LectureNo	ChapterName	Topic	Text/ Reference Books	Pedagogical Tool**	Mapped with CO Numer (s)
1	1	Software Development Models	Introduction to software development and various types of Software Development Models	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,PPT,R eports	CO1
1	2	Software Development Models	Traditional approach Vs. Agile software development,	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO1
1	3	Software Development Models	Evolutionary Prototype model	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO1

1	4	Software Development Models	Agile model Vs. Waterfall model	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO1
1	5	Software Development Models	Agile model Vs. Waterfall model	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO1
1	6	Introduction to Agile	Introduction	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO1
1	7	Introduction to Agile	Need of Agile	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO1

1	8	Introduction to Agile	Advantage & Disadvantage,	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO1
1	9	Introduction to Agile	Advantage & Disadvantage, Characteristics of Agile	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO1
1	10	Introduction to Agile	Roles in Agile, Agile workflow	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO1
1	11	Agile Methodology	Manifesto, Agile Methodology	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO2

1	12	Agile Methodology	Agile SDLC	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO2
1	13	Agile Methodology	Agile Testing	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO2
1	14	Agile Methodology	Agile Approach to Quality Assurance	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO2
1	15	Agile Methodology	Test Driven Development	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO2

2	16	Agile Project Management	Project Management introduction	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO2
2	17	Agile Project Management	Agile Scrum, Project management methodology	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO2
2	18	Agile Project Management	Selection of right project management methodology	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO4
2	19	Agile Project Management	Continuous integration and continuous delivery (CI/CD) in agile development.	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO4

2	20	Agile Project Management	Continuous integration and continuous delivery (CI/CD) in agile development.	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO4
2	21	Scrum	Scrum framework, Scrum Roles	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5
2	22	Scrum	Agile Kanban, Agile Vs. Scrum	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5
2	23	Scrum	Product Backlog	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5

2	24	Scrum	Scrum Practices	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5
2	25	Scrum	Process flow of Scrum Methodologies	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5
2	26	Agile Design	Agile Daily Stand-up	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO4
2	27	Agile Design	Sprint Review meeting vs Daily Stand-up meeting in Agile	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO4

2	28	Agile Design	Definition of Done, Agile Design	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO4
2	29	Agile Design	Retrospective in Agile development.	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO4
2	30	Agile Design	Retrospective in Agile development.	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO4
3	31	Product Management	Product Management, Project roadmap, Product manager, Agile Scale.	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO3

3	32	Product Management	Product Management, Project roadmap, Product manager, Agile Scale.	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO3
3	33	Scaled Agile Framework	Scaled Agile Framework, Uses of Scaled Agile Framework	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO3
3	34	Scaled Agile Framework	Difference between Scaled Agile framework and other Agile practices	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO3
3	35	Scaled Agile Framework	Foundations of Scaled Agile Framework Agile Metrics	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO3

3	36	Scaled Agile Framework	Feature Driven Development(FDD) – Financial and Production	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO3
3	37	Scaled Agile Framework	Minimum Viable Product(MVP) and its role in Agile development	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO3
3	38	Scaled Agile Framework	Minimum Viable Product(MVP) and its role in Agile development	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO3
3	39	Introduction to Agile CRM	Agile Tools, Introduction to Agile CRM	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5

3	40	Introduction to Agile CRM	Needs and benefits of Agile CRM.	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5
3	41	Introduction to Agile CRM	Needs and benefits of Agile CRM.	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5
3	42	Self-study topics for Advance learners:	Agile Scale	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5
3	43	Self-study topics for Advance learners:	Continuous integration and continuous delivery (CI/CD) in agile development,	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5

3	44	Self-study topics for Advance learners:	Agile Testing	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO3
3	45	Self-study topics for Advance learners:	Agile Testing	,T-Agile Software Development wit,T-Agile Software Development, Pr,R-Agile Software Development: Th,R-Agile Testing: A Practical Gui	Activity,Case Study,Flippe d Classes,Info graphics,Inst ructor Lead WorkShop,P PT,Professo r of Practice/Adj unct Faculty/Visiti ng Professor,R eports,Simul ation,Video Lecture	CO5

Assessment Model			
Sr No	Assessment Name	Exam Name	Max Marks
1	24TH02	External Theory	60
2	24TH02	Attendance Marks	2
3	24TH02	Mid-Semester Test-1	20
4	24TH02	Surprise Test	12
5	24TH02	Mid-Semester Test-2	20
6	24TH02	Assignment/STP	10
7	24TH02	PBL/Case Study	10
8	24TH02	Quiz/Test	4