CSCI511 - Agile Software Development Approaches

Class time Tuesdays, 2-4:50pm, KAP 145

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Course Description

This course focuses on the software development process by using various Agile practices. Students will study various Agile concepts such as Scrum, Extreme Programming, Lean, and Kanban. With several hands-on exercises, students will learn how to properly apply the Agile framework into their software development process.

Syllabus

Week	Topics
1 Jan 15	Agile and Lean Software Development: Basics and Fundamentals • Values, principles, stakeholders
2 Jan 22	Lean Approach • Waste Management, Kaizen and Kanban
3 Jan 29	Agile and Scrum Principles • Agile Manifesto, Twelve Practices of XP
4 Feb 5	Agile Product Management - I • Communication, Planning, Estimation
5 Feb 12	Agile Product Management - II • Quality, Risk, Metrics and Measurements
6 Feb 26	Iteration I - Project Presentation and Retrospective Analysis
7 Feb 19	Agile Requirements • User Stories, Backlog Management
8 Mar 5	Agile Architecture • Feature-Driven Development
9 Mar 12	Agile Risk Management • Risk and Quality Assurance
10 Mar 19	--------- Spring Break ----------
11 Mar 26	Iteration II - Project Presentation and Retrospective Analysis
12 Apr 2	Agile Review • Agile Metrics and Measurements
13 Apr 9	Agile Testing • Test-Driven Development, User Acceptance Test
14 Apr 16	Scaling Agile for large projects • Scrum of Scrums, Team collaborations
15 Apr 23	Iteration III - Project Presentation and Retrospective Analysis

Marks Allocation

Homework	30%
Individual hands-on exercise	30%
Team Project	30%
Participation	10%

References

No required textbook for this course, Lecture notes and supplementary materials will be provided