CS 4570- 5070 – Agile Software Development

Instructor
Alireza Boloorchi Tabrizi
Adjunct Professor
Office: NA
Email: boloorc@okstate.edu
Phone:
Office Hours: by appointment

Description
This course includes a comprehensive overview of the principles and practices of agile software development based on Agile community's recent recommendations. The emphasis is on quick realization of system value through disciplined, iterative, and incremental software development techniques and the elimination of wasteful practices.

This is an online course. All lectures, resources, assignments, and correspondence are accessed entirely online through Canvas at canvas.okstate.edu. You must use your campus email and password to access the course.

Prerequisites
This course is language independent and there is no prerequisite associated with it. As agile methods apply to a wide variety of development projects and span from project management to detailed implementation, each student will have the flexibility to use a programming language or system (including Excel) of their choice on the class project. Non-programming projects may also be selected.

Goals and Objectives
The primary objective of this course is to introduce students to Agile Software development life cycle. Students will learn techniques for initiating, planning, and implementing software development projects using Agile methodologies. Popular Agile methods, including Scrum, eXtreme Programming, and Kanban, will be introduced and practiced during this course. The contrast with traditional methodologies and software development practices, such as waterfall and spiral, will also be discussed.
Several tools are available in the industry for practicing Agile. Students will learn how to utilize these tools while working on their course projects, which will involve establishing an Agile team environment, assigning roles and responsibilities, establishing communication and reporting methods, and embracing change.
Additional subthemes in this course will include enterprise agility, team dynamics, collaboration, software quality, and metrics for reporting progress.

**Textbook**
Book Title(s): Agile Project Management
Book Author(s): Jim Highsmith

**Instructor Response Time**
Instructor will be able to respond to most student inquiries within 24-48 hours. Grades and/or feedback for assignments will be within 2 weeks of the assignment due date.

**Participation Expectations**
This is a highly interactive course and it is expected from the students to attend as many sessions as possible. Face to Face communication is one of the major part of this course and to the extent possible it is expected to have the camera on and full attention during the live classes. Canvas communications attention to the announcement is an integral part of this course.

**Grading Policy**
Homework and Quizzes: 20%
Mid-term Exam: 15%
Individual Project and Team Project: 30%
Research project (Graduate): 10%
Final Exam 25%

**Assignment Descriptions**
The Assignments specifics will be discussed during the first live session. In addition, at the end of each session we will go over the assignments for the next week.

**Technical Requirements**
During this course we use Zoom as well as Miro as the interactive tool for better communication.

**Netiquette**
Please review [http://casid.okstate.edu/pages/documents/netiquette.pdf](http://casid.okstate.edu/pages/documents/netiquette.pdf) and/or visual aid [http://casid.okstate.edu/pages/documents/netiquette_print.pdf](http://casid.okstate.edu/pages/documents/netiquette_print.pdf) before the first session. Also we will come up a with a team agreement during the first live session.
## Course Schedule

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<thead>
<tr>
<th>Week</th>
<th>Area</th>
<th>Topic</th>
<th>Hours of coverage</th>
<th>Activities</th>
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</thead>
<tbody>
<tr>
<td>June 7- June 14</td>
<td>Agile Foundations</td>
<td>Introduction to Agile</td>
<td>3</td>
<td>Assignment 1, Proj Proposal</td>
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<tr>
<td>June 14- June 28</td>
<td>Agile Frameworks</td>
<td>Introduction to Scrum</td>
<td>6</td>
<td>Assignment 2, 3 Project proposal due</td>
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<tr>
<td>June 28- July 5</td>
<td>Agile Frameworks</td>
<td>Lean and Kanban</td>
<td>6</td>
<td>Assignment 4,</td>
</tr>
<tr>
<td>July 5- July 12</td>
<td>Agile Frameworks</td>
<td>Extreme programming</td>
<td>3</td>
<td>Assignment 5, Project phase 1 due</td>
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<tr>
<td>July 12- July 19</td>
<td>Agile Product</td>
<td>Design Thinking and User story Writing</td>
<td>3</td>
<td>Quiz 1 Term paper will be assigned, Project phase 2 due</td>
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<tr>
<td>Management</td>
<td>Frameworks</td>
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<tr>
<td>July 19- July 26</td>
<td>Agile Frameworks</td>
<td>Scrum and Sprint Planning</td>
<td>3</td>
<td>Assignment 6, Project phase 3 due</td>
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<tr>
<td>July 26- Aug 2</td>
<td>Scaled Agile</td>
<td>Introduction to Scaling Frameworks</td>
<td>3</td>
<td>Term papers due, Final exam</td>
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