**Syllabus**

**CSE 6324: Advanced Topics in Software Engineering**

**Agile Methodologies**

Tuesdays & Thursdays 9:30 AM - 10:50 PM; Room# SH 129

Instructor:    Bahram Khalili; PhD

E-Mail:   [khalili@uta.edu](file:///C:\UTA\CSE%205325\redir.aspx%3fC=c1476205027741deb659a408f81d1a31&URL=mailto:khalili@uta.edu)

Website: [http://ranger.uta.edu/~khalili](file:///C:\UTA\CSE%205325\redir.aspx%3fC=c1476205027741deb659a408f81d1a31&URL=http:\ranger.uta.edu\~khalili)

Phone: 817-272-5407

Office Location: ERB 629

Office Hours: Tuesdays & Thursdays 11:00 - 12:20 PM or by Appointment

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GTA Information:

Name:  **Mr. Michael Ho**

E-Mail: [michael.ho22@mavs.uta.edu](mailto:michael.ho22@mavs.uta.edu)

Phone: 682-240-2433

Office Location:  ERB 513

Office Hours: MW 2:00 – 3:30 PM

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Required Textbook: No text book required, material will be provided by the instructor throughout the semester

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**Course Description from University Catalog:**   

Study of foundations, techniques and tools for agile methodologies in software engineering including agile manifesto and principles such as pair programming, test-first and refactoring. Latest papers in agile methodologies are reviewed and practiced. Prerequisite: CSE 5324 or consent of instructor.

**Course Objective and Assessment:**

This course will cover various software engineering principles and techniques using an agile approach mostly via published papers and material provided by the instructor. The course coverage will include, but not limited to, the following topics:

* Agile methods and principles
* Extreme programming and Scrum
* Iteration/sprint planning
* Time-box and velocity
* Poker planning for project scheduling and estimation
* Daily standup meetings
* Scaling agile methods
* Agile Project Management: Definitions, Issues and Challenges
* Project stories and backlogs

For each of the above topics, students will learn the basics and practice them via project increments in an agile team setting. All students will be required to participate in numerous presentations throughout this class.

**Instructional Methods and Class Schedule**

Students will be lectured on the required techniques one day of the week and practice these techniques on their agile project in the following lecture. Students will design and develop an android project, a game developed using an agile approach, through a systematic approach specifying requirements via stories, defining the required increments and proceeding to implementation and testing. Students will deliver small increments of their projects weekly until the full project is developed. All activities are logged and presented by team members weekly. A number of published papers will also be included in course material and presentations:

* Introduction to agile
* Team Formation (5 or 7 members per team) and project selection
* Poker planning and time estimation
* Requirements: project stories and increment planning
* Pair programming
* Refactoring
* Test-first planning
* Incremental delivery and presentations {Repeat weekly}
* Integration and testing {Repeat}
* Peer Reviews
* Written and oral reports
* Final Team Presentations
* Project recap and course closure

**Grading Policy:**

* Sprint completion & delivery (5) 25%
* Daily stand-up presentations (5) 25%
* Scrum reports (5) 10%
* Exams (2) 40%

**Grade Distribution:**

A = 100 to 90, B = 89 - 75, C = 74 - 60, D = 59 - 50, F = 49 and Below

**Attendance:**

Attendance is mandatory in this class. If you cannot make it to any lecture, you must inform me via e-mail prior to the start of that lecture. E-mails after the lecture is over is not acceptable. Emergency situations will be reviewed per specific circumstance. If you miss more than 2 lectures without prior notification, excluding the emergency situations, you may receive a failing grade or reduction in your course grade.

**General Policies:**

* Students are responsible for checking this web site frequently for course related material and announcements. This site will be the primary form of communication for the course unless otherwise specified.
* Please use "CSE 6324" in the Subject line of all e-mail correspondence.
* Any homework or projects assigned is due at the end of the class on the due date. There is a 10% penalty for every 24 hours being late, or fraction thereof, beyond the deadline. Maximum latency is 5 days beyond which a grade of zero will be assigned.
* No make-up exams.
* You may select any tools/language/systems to implement your assignments/project.
* The instructor reserves the right to modify the policies, calendar, assignments, slides or due dates if necessary.
* Faculty are required by law to provide "reasonable accommodation" to students with disabilities, so as not to discriminate because of that disability. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.

**Academic Integrity:**

It is the philosophy of The University of Texas at Arlington that academic dishonesty is completely unacceptable and will not be tolerated. Anyone involved in academic dishonesty will be disciplined in accordance with University regulations and procedures, possibly including suspension or expulsion from the University. "Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Please refer to the university's policy in this regards at <http://www.uta.edu/conduct/academic-integrity/index.php>