University of New Orleans

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University of New Orleans Syllabi

Fall 2015

CSCI 6990

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University of New Orleans

Recommended Citation

Fall 2015
CSCI 6990: Agile Software Eng.
Course Outline

CSCI 6990-02: Agile Software Engineering

Instructor:	Dr. Minhaz F. Zibran	Classes:	Tues, Thurs 8:00 — 9:15 am
Office:	Math 343	Classroom:	Math ~~122~~ 212
Email:	zibran@cs.uno.edu		
Phone:	(504) 659 0284		
Office hour:	Tuesday, Wednesday, Thursday: 3:00 pm — 5:00 pm		
	(appointment encouraged)		

1 Prerequisites

- CSCI 1583 (Software Design and Development I),

- CSCI 2120 (Software Design and Development II),

- CSCI 2125 (Data Structures),

- Strong grasp in Java Programming.

2 Overview

There are a number of different aspects of software engineering and software development. Software engineering is not entirely about source code. Like any industrial product, a software product is also developed undergoing a disciplined process and engineering techniques. This course emphasizes on software process, in particular the agile development process, which has drawn tremendous interests and adoption in the industry over the last decade.

3 Topics

Tentative topics of exercise include software process, waterfall model, RUP, XP, pair programming, test driven development, feature driven development, prototyping, lean development, refactoring, SCRUM, CRYSTAL, version control, continuous integration, team building, collaboration, documentation, use cases, customer communication/negotiation, software measurement, planning, quality assurance, estimation, risk management, triage, adoption of agile methods based on organization's structure.

4 Approach

In this course, the students will learn and exercise the best practices of agile software engineering. The entire class will work in teams on one or more software development projects, in which they will apply agile techniques, as they will learn from lectures, presentations, readings, discussions, and exercises.

This course will suit you, if:

- You enjoy learning by doing instead of reading and listening.

- You are comfortable/willing to perform in team environment.

- You are willing to spend time in programming and troubleshooting outside class time.

This course may not suit you, if:

- You prefer materials that deal with well-defined right/wrong answer, instead of those questions where there may be more than one right answers depending on the context and arguments made.

- You intend to pass the course by mastering the handouts without actively participating in classes and learning activities.

5 Course Objectives/Outcomes

This course emphasizes that the students learn to apply agile techniques by performing in teams with collaboration, communication and cooperation. In addition, the students will develop skills for doing critiques and formal presentation of technical materials, which are also important for success of agile software development process. After successful completion of the course the students will have fulfilled the following objectives in the least:

- Students will be able to explain the fundamental techniques of agile software engineering methods.

- Students will be able to use agile methods for software development.

- Students will be able to make collaborative decisions about adopting agile methods that fit in particular organization structure and the projects under consideration. algorithms and data structures.

6 Components and Course Engagement

The students are expected to attend classes and participate class discussions and activities. There are four major components for the students to engage in.

Team Project: Students will work in teams in software development projects and exercise agile methodologies.

Individual Project: Each student must also carry out a project individually. Students should communicate with the instructor about their project interests, scope, and possibilities. At the end of the semester, each student must submit a final project report, which they may also need to present in front of the class.

Class Participation and Presentations: Student must engage in discussions and activities in the classroom. Students will be required to make class presentation on a certain topic (e.g., research paper, tech demo, etc.) for knowledge sharing or on their own work.

Readings/Critiques/Quizzes/Homework: There may be sudden (i.e., pop) quizzes starting at the beginning of class. Do not miss class or be late in class so that you do not miss a quiz or have inadequate time to complete your quiz. In addition, reading assignment, critique writing, or homework will be assigned.

Note: Students will also have to perform peer evaluation, which will be counted towards their final grade for the particular component of the course and thus can affect their overall grade for the entire course.

7 Grading Scheme

The total/final grade points for the course is distributed as follows:

Team project	45%
Individual project	20%
Class participation & presentations	20%
Readings/Critiques/Quizzes/Homework	15%

All work is graded on a numerical (percentage) basis. The correspondence between numerical and letter grades is given as follows:

A: ≥ 90,
B: $80 - 89$,
C: $70 - 79$,
D: $50 - 69$,
F: < 50.

Note:

- No make-ups for graded work (either tests or homework) will be given except for a legitimate (e.g., medical) reasons.

- Questions about the grading of student work should be raised within 72 hours of its return. After that time frame, issues raised will risk not being entertained.

- Students should retain all returned graded work, in case there are issues raised about the grade.

- The "I" grade (for Incomplete) is given only in exceptional circumstances according to UNO's policy.

7.1 Late Submissions

It is expected that all individual work will be turned in on time. Lateness penalties are $10n\%$ points off where n is the number of days late, and $n \leq 3$, which means anything past due over three days will not be accepted. Thus,

- one day late — 10% off;

- two days late — 20% off;

- three days late — 30% off;

- more than three days late — 100% off.

8 Textbook and References

The course will not be using one fixed textbook. Instead, we will use a number of references including the following:

- Robert C. Martin, "Agile Software Development, Principles, Patterns, and Practices", Pearson.

- Alan S. Koch, "Agile Software Development", Artech House.

- James Shore and Shane Warden, "The Art of Agile Development", O'Relly.

- Jonathan Rasmusson, "The Agile Samurai", The Pragmatic Bookshelf.

- Mike Cohn, "Agile Estimating and Planning", Pearson.

- Robert C. Martin, "Clean Code: A Handbook of Agile Software Craftsmanship", Pearson.

- Joshua Bloch, "Effective Java", Addison-Wesley.

9 Attendance Policy

Students are expected to attend classes on time and participate in the class activities. The UNO Senate (Feb. 20, 2002) has made the taking of attendance a requirement for "developmental, 1000, and 2000 level courses." Attendance will therefore be taken at each class meeting. Although not a formal component of the computation of grades, good attendance will impact final grades in borderline cases. Important course content is often introduced outside of the published/provided sources and/or scheduled presentations.

10 Academic Integrety

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at `http://www.studentaffairs.uno.edu`.

Academic dishonesty, in particular, includes "the unauthorized collaboration with another person in preparing an academic exercise" and "submitting as one's own any academic exercise prepared totally or in part for/by another." In the event of academic dishonesty, the student may be assigned a grade of 0 on the exam or exercise, the student may be informed in writing of the action taken, and a copy of this letter may be sent to the Assistant Dean for Special Student Services.

11 Students with Disabilities

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to `http://www.ods.uno.edu`.

Important Dates*
Last day to adjust schedule w/out fee.......................08/18/2015
Semester Classes Begin 08/19/2015
Last day to adjust schedule w/fee,
or withdraw with 100% refund..................................08/25/2015
Last day to apply for December commencement 09/25/2015
Final day to drop a course or resign 10/14/2015
Mid-semester examinations...........................10/05-10/09/2015
Final examinations..12/07-12/11/2015
Commencement 12/18/2015
*Note: check Registrar's website for Saturday and A/B sessions,
and for items not listed here: http://www.registrar.uno.edu

Fall Semester Holidays
Labor Day 09/07/2015
Mid-semester break 10/15-10/16/2015
Thanksgiving 11/26-11/27/2015

Withdrawal Policy – Undergraduate only
Students are responsible for initiating action to resign from the University (withdraw from all courses) or from a course on or before dates indicated in the current Important dates calendar. Students who fail to resign by the published final date for such action will be retained on the class rolls even though they may be absent for the remainder of the semester and be graded as if they were in attendance. Failure to attend classes does not constitute a resignation. Check the dates on the Registrar's website, http://www.registrar.uno.edu. Please consult The Bulletin for charges associated with dropping and adding courses.

Incomplete Policy – Undergraduate only
The grade of I means *incomplete* and is given for work of passing quality but which, because of circumstances beyond the student's control, is not complete. The issuance of the grade of I is at the discretion of the faculty member teaching the course. For all graduate and undergraduate students, a grade of I becomes a grade of F if it is not converted before the deadline for adding courses for credit (as printed in the Important Dates Calendar) of the next regular semester including summer semester.

Repeat Policy
When a student is permitted to repeat a course for credit, the last grade earned shall be the one which determines course acceptability for degree credit. A student who has earned a C or better in a course may not repeat that course unless, (1) the catalog description indicates that the course may be repeated for credit, or (2) the student's Dean gives prior approval for documented extenuating circumstances.

Graduate Policies
Graduate policies often vary from undergraduate policies. To view the applicable policies for graduate students, see the Graduate Student Handbook:
http://www.uno.edu/grad/documents/GraduateStudentHandbook2014.pdf

Academic Dishonesty Policy
http://www.uno.edu/student-affairs-enrollment-management/documents/academic-dishonesty-policy-rev2014.pdf

Safety Awareness Facts and Education
Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here:
http://www.uno.edu/student-affairs-enrollment-management/

UNO Counseling Services and UNO Cares

UNO offers care and support for students in any type of distress. Counseling Services assist students in addressing mental health concerns through assessment, short-term counseling, and career testing and counseling. Find out more at http://www.uno.edu/counseling-services/. First-year students often have unique concerns, and UNO Cares is designed to address those students succeed. Contact UNO Cares through http://www.uno.edu/fye/uno-cares.aspx.

Emergency Procedures
Sign up for emergency notifications via text and/or email at E2Campus Notification: http://www.uno.edu/ehso/emergency-communications/index.aspx. All emergency and safety procedures are explained at the Emergency Health and Safety Office: http://www.uno.edu/ehso/.

Diversity at UNO
As the most diverse public university in the state, UNO maintains a Diversity Affairs division to support the university's efforts towards creating an environment of healthy respect, tolerance, and appreciation for the people from all walks of life, and the expression of intellectual point of view and personal lifestyle. The Office of Diversity Affairs promotes these values through a wide range of programming and activities.
http://diversity.uno.edu/index.cfm

Learning and Support Services
Help is within reach in the form of learning support services, including tutoring in writing and math and other supplemental instruction. Visit the Learning Resource Center in LA 334, or learn more at http://www.uno.edu/lrc/.

Affirmative Action and Equal Opportunity
UNO is an equal opportunity employer. The Human Resource Management department has more information on UNO's compliance with federal and state regulations regarding EEOC in its Policies and Resources website: http://www.uno.edu/human-resource-management/policies.aspx

WEEK 1 [Aug 17 – Aug 21]   **Course Overview**
Aug 20: First day of class, Team Formation

WEEK 2 [Aug 24 – Aug 28]   **Ice breaking**
Aug 25: presentation from potential business client
Aug 27: Marshmallow exercise

WEEK 3 [Aug 31 – Sept 4]   **Team Projects Assignment**
Sept 1: Project Visioning   Team formation
Sept 3: Overview of Agile Methods

WEEK 4 [Sept 7 – Sept 11]   **Start of Sprint 1**
Sept 8: Overview of Agile Methods
Sept 10: Individual project proposal due

WEEK 5 [Sept 14 – Sept 18]   **Individual Projects Assignment**
Sept 15: Release planning
Sept 17: Release planning

WEEK 6 [Sept 21 – Sept 25]   **Start of Sprint 2**
Sept 22: Iteration Planning
Sept 24: Progress Tracking

WEEK 7 [Sept 28 – Oct 02]
Sept 29: Knowledge Sharing
Oct 1: Pair Programming

WEEK 8 [Oct 5 – Oct 9]   **Start of Sprint 3**
Oct 6: Example-driven Development
Oct 8: Unit-test-driven Development

WEEK 9 [Oct 12 – Oct 16]
Oct 13:
Oct 15: Mid-semester break (no class)

WEEK 10 [Oct 19 – Oct 23]
Oct 20: Agile Quality Assurance
Oct 22: Lean Software Development

WEEK 11 [Oct 26 – Oct 30]   **Start of Sprint 4**
Oct 27: Process Improvements and Retrospectives
Oct 29: Version and Configuration management

WEEK 12 [Nov 2 – Nov 6]
Nov 3: Release planning for team projects
Nov 5: State Space of Testing

WEEK 13 [Nov 9 – Nov 13]   **Team Projects Postmortem**
Nov 10: Team Projects Postmortem, reporting, and Evaluation
Nov 12: Team Projects Postmortem, reporting, and Evaluation

WEEK 14 [Nov 16 – Nov 20]   **Individual Projects Presentations**
Nov 17: Individual Project Presentation
Nov 19: Individual Project Presentation

WEEK 15 [Nov 23 – Nov 27]   **Team Project Assessment**
Nov 24: Individual Project Presentation
Nov 26: *Thanksgiving holiday (no class)*

WEEK 16 [Nov 30 – Dec 4]   **Individual Project Presentation**
Dec 1: Individual Project Presentation, deadline for individual project report submission
Dec 3: (Last class) Individual Project Presentation