Course Name: Spring 2018

SER 518: Software Factory II

Catalog Description:
Second in a two-semester capstone culminating experience for graduate students. Student teams work through concurrent product and service offering lifecycles in a project context. Covers concepts including opportunity assessment, risk management, technology evaluation, licensing models, resource planning, delivery models such as hosted, turnkey, and Software as a Service (SaaS), technology acquisition, outsourcing, governance, quality assurance, software certification, and continuous process improvement.

General Information:

Instructor	Robert Heinrichs, robert.heinrichs@asu.edu
Office / office hours	Peralta Hall 230R / Mondays and Wednesdays, 2:00 - 3:00 PM
Schedule line number	25294
Class website	On Blackboard

Topics:
This course has scheduled class meetings that will be used to conduct interviews with groups and individual students. During those interviews the current status of the project work and progress is reported.

Course Outcomes:
Students completing the Software Factory sequence will be able to:
- (Technical Competency) develop high quality software based on requirements and user environment
- (Technical Competency) apply modern tools and methods in a software development process
- (Design, Communication and Team skills) evaluate and adapt software processes to meet the needs of a software project, its team and user environment
- (Communication and Team skills) work effectively in a team to produce high quality software
- (Professionalism and Perspective) Identify and understand professional, ethical, legal, security, social issues and responsibilities relevant to engineering software systems.

Useful Course Materials:
Recommended:
- Ian Sommerville, "Software Engineering" 10th edition (If you have the 9th edition you can use it too).
- Kenneth S. Rubin, “Essential Scrum: A Practical Guide to the Most Popular Agile Process”, 1st Edition
- Jeff Sutherland, “Scrum: The Art of Doing Twice the Work in Half the Time”

Assignments:
As a project-centered course, there will not be assignments in the regular course sense. Students will be expected to participate in factory projects for 15 hours per week outside of class. Individual regular status reports are used to track the progress and work of each individual student. The students have to create deliverables during the course as announced by the instructor.

Evaluation:
There are two major components of your grade in this course: team work and individual work. The grade you receive for team work will be impacted by your contribution and participation as determined through feedback from the project sponsor, instructor, teaching assistants and team members. You are expected to contribute to all deliverables. Additionally, a significant portion of your grade is based on your individual oral (e.g. interviews) and written (e.g. meeting minutes, deliverables) communication.

Team work	**45%**
Graded items (including but not limited to)	Project documentation, repository, SE process documentation
	Final deliverable (including but not limited to code, presentation, video)
	Sponsor feedback
	Correct application of SE process
	Quality of Meeting Minutes

Individual work	**55%**
Graded items (including but not limited to)	Final deliverable (including but not limited to coding, presentation, documentation)
	Participation (teamwork and in class)
	Consistent coding activity / Quality of code
	Regular individual status reports
	Attendance / Punctuality
	Ethical aspects
	Individual interviews

No exams are given. Each team might complete online peer evaluation(s) during the semester to monitor progress. Students might also provide a final team evaluation at the end of the semester.

Other:
- Classes are mandatory unless stated otherwise by the instructor
- Unexcused absences in classes and/or scheduled meetings result in a final grade penalty of up to 1% per unexcused absence
- Late appearances to classes and/or scheduled meetings result in a final grade penalty of up to 0.5% per late appearance
- Not creating a significant, mature software code during the semester results in failing this class

Grading Scale:
The instructor reserves the right to change the grading scale at any point in time and announces the used scale - if changed - when publishing the final grades.
Note: In order to meet the Division of Graduate Studies' requirement for the Master's culminating experience you need at least a B.

Grade	Percentage range
A+	98% to 100%
A	95% and less than 98%
A-	92% and less than 95%
B+	89% and less than 92%
B	86% and less than 89%
B-	83% and less than 86%
C+	80% and less than 83%
C	75% and less than 80%
D	70% and less than 75%
E	0% and less than 70%

Grade Appeals:
Students may appeal a scored assessment within one week of the grade's posting online. Appeals are in written form only (including email) and must point to specific evidence of why the grade should be revised. Arbitrary "please regrade because I want a higher score" queries will be discarded without a response. The instructor reserves the right to assign a lower score on appeal.

Absence & Make-Up Policies:
Notify the instructor BEFORE an assignment is due if an urgent situation arises and the assignment will not be submitted on time and/or.

Absences from classes and/or scheduled meetings are only excused if a) the absence is an excused absence per ASU policy and b) you provide proof for it. You will only receive a reply to an excuse request if you notify the instructor about your excused absence with proof. Unless you received an excuse from the instructor, you are not excused from class and/or scheduled meetings.

Published assignment due dates (Arizona Mountain Standard time) are firm. Please follow the appropriate University policies to request an accommodation for religious practices (http://www.asu.edu/aad/manuals/acd/acd304-04.html) or to accommodate a missed assignment due to University-sanctioned activities (http://www.asu.edu/aad/manuals/acd/acd304-02.html). Accommodations will be made for religious observances provided that students notify the instructor at the beginning of the semester concerning those dates. Students who expect to miss class due to officially university-sanctioned activities should inform the instructor early in the semester. Alternative arrangements will generally be made for any examinations and other graded in-class work affected by such absences.

Classroom Behavior:
Any violent or threatening conduct by an ASU student in this class will be reported to the ASU Police Department and the Office of the Dean of Students.

Students are expected to participate in the educational process and not be a disruptive element with regard to the learning of others. Safety, self-discipline and respect for others are necessary elements in the educational processes employed in this course. All students should be familiar with the Student Code of Conduct, which can be found at http://www.asu.edu/studentlife/judicial/.

Academic Integrity:
All students in this class are subject to ASU's Academic Integrity Policy (available at http://provost.asu.edu/academicintegrity) and should acquaint themselves with its content and requirements, including a strict prohibition against plagiarism. All violations will be reported to the Dean's office, who maintain records of all offenses. Students are expected to abide by the FSE Honor Code (http://engineering.asu.edu/integrity/).
The Student Academic Integrity Policy of Arizona State University requires each student to act with honesty and integrity and to respect the rights of others in carrying out all academic assignments. There are a number of actions that constitute a violation of the policy. These actions in this course include, but are not limited to:

1. practicing any form of academic deceit;
2. referring to materials or sources or employing devices (e.g., audio recorders, crib sheets, calculators, solution manuals, or commercial research services) not specifically authorized by the instructor for use during tests, quizzes, homework, and class activities;
3. acting as a substitute for another person in any academic evaluation or using a substitute in any academic evaluation;
4. possessing, buying, selling, or otherwise obtaining or using, without appropriate authorization, a copy of any materials intended to be used for academic evaluation in advance of its administration;
5. on the aid of others to the extent that the work is not representative of the student's abilities, knowing or having good reason to believe that this aid is not authorized by the instructor;
6. providing inappropriate aid to another person, knowing or having good reason to believe the aid is not authorized by the instructor;
7. submitting the ideas or work of another person or persons without customary and proper acknowledgment of sources (i.e., engaging in plagiarism);
8. permitting one's own ideas or work to be submitted by another person without the instructor's authorization; or attempting to influence or change any academic evaluation or record for reasons having no relevance to class achievement.
9. turning in work/code done by someone else or another pair/group
10. copying work/code done by someone else or another pair/group
11. writing code together with someone else or with another pair/group (unless expressly allowed by the instructor)

A common question in programming courses is the use of code that is "googled" or found on popular sites such as StackOverflow. Items 5 and 7 pertain to this situation. Most programmers use reference examples, found in print or online. This is fine as a practice but is not acceptable in situations where you are using code to proxy your understanding of the coding concepts applied in that assessment (i.e. lab or in-class activity). First, if you are uncertain if it is allowable or not, verify directly with the instructor before submitting the assignment. Second, if it is allowable, you are still required to a) adhere to all originating author's constraints on the use and licensing of the code, and b) provide proper attribution (full URL to the code snippet or bibliographic reference to a print item). Failure to do so constitutes a violation of this Academic Integrity Policy.

Students may be allowed to work in small teams on lab and in-class assessments. You are to work with your partners and only your partners as directed by the instructor; receiving assistance from anyone else other than your partners, the graders, teaching assistants, approved tutors or the instructor is considered a violation of this Academic Integrity Policy. Further, on any paired/group assessments you remain individually responsible for the entire solution – you must understand it fully, and there will grades awarded between the individuals in the pair/group. From an ethics standpoint, you have a professional responsibility to your partner to give your best effort on each programming assignment. Failure to do so will be considered an ethics violation.

The penalty for an Academic Integrity Violation (cheating) on an in-class assessment or lab will be a reduction of a course letter grade for the first offense, and failure of the course for a second offense. The penalty for an Academic Integrity Violation (cheating) on an exam is immediate failure of the course. The penalty for an ethics violation will be a zero for the in-class assessment or lab. All violations will be referred to the Dean's Office of the Ira A. Fulton Schools of Engineering.

Disability Accommodations:
Suitable accommodations will be made for students having disabilities and students should notify the instructor as early as possible if they will require same. Such students must be registered with the Disability Resource Center and provide documentation to that effect.

Sexual Discrimination:
Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at https://sexualviolenceprevention.asu.edu/faqs.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, https://eoss.asu.edu/counseling, is available if you wish discuss any concerns confidentially and privately.

Copyright:

Change Notice:
Any information in this syllabus (other than grading and absence policies) may be subject to change with reasonable advance notice.