SER 515 - Software Enterprise: Inception and Elaboration, Fall 2016

Catalog Description
Project-centric course focusing on the relationship of software processes to entrepreneurship and business processes; requirements specification and requirements analysis; study of the context and evolution of the software enterprise. The first of a 2-semester sequence.

General Information
Instructor: Dr. Tim Lindquist; Tim.Lindquist@asu.edu, (480) 727-2783
Office Hours: TTH 10:30am-noon, other days/times by appointment
Office: Peralta 230D
Class Meeting Time: 4:30-7:15pm Mondays
Class Website: Blackboard
TA: Ishrat Ahmed, Ishrat.Ahmed@asu.edu, office hours ?? in Peralta 235 (the “bullpen”)

Prerequisites
• Graduate status
• A desire to learn and participate in class.

Expanded Course Description
This course is part of the 4-course 1st-year core curriculum for incoming software engineering graduate students. The purpose of this course and the follow-on, SER516, is to provide a background on software engineering as a sub-discipline of computer science. Further, as graduate students these courses serve as an introduction to critical inquiry, which distinguishes your graduate education from your undergraduate education. To this end, you will engage in learning activities that introduce you to the field of software engineering as well as critical inquiry activities that introduce you to software engineering research methods. The fall semester (this course) will be weighted toward the areas of software requirements, analysis, and design in software engineering.

Course Outcomes
After successfully completing SER515, the student will:
1. Gain a basic knowledge of the field of software engineering, including current challenges and research directions.
2. Develop competency in the requirements, analysis, and design phases of software engineering.
3. Gain awareness and competency in research methods for software engineering, including but not limited to:
   a. Literature review – understanding how to qualify and critically review literature sources.
   b. Communication – an ability to communicate critical thinking ideas verbally in small teams or in front of large audiences, and in written form.
   c. Process, and Methods – understanding the basic research process and methods used
4. Gain awareness and competency in the use of formalisms in software engineering

Textbooks

Grading

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<thead>
<tr>
<th>Category</th>
<th>Weight</th>
<th>Description</th>
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<tbody>
<tr>
<td>Software Engineering Project</td>
<td>30%</td>
<td>Individual instrumented software development project</td>
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<tr>
<td>Problem Sets &amp; Quizzes</td>
<td>30%</td>
<td>In-class and take-home assignments on course outcomes, and in-class quizzes</td>
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<tr>
<td>Final Exam</td>
<td>40%</td>
<td>Given the last day of class, cumulative</td>
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Learning Activities
This course is unique in that it meets in-person only once per week. Further it meets on Monday evenings. Therefore I expect you to conduct a significant amount of outside activity, including reading, writing, and completing exercises. I also expect that you will check the course Blackboard site frequently for announcements, assignment postings/changes, and discussions.

Project
You will complete in a comprehensive software engineering project this semester. The project will emphasize requirements but will ask you to work all the way through to project delivery. The project structure will be discussed in class. The 2nd to last class will be reserved for a faux conference where you will present your work, but also review your peers’ projects.

Critical Inquiry
You will have a weekly assignment to work through one chapter of the textbook, and additionally each week you will review 1-4 academic papers and write a critical summary. These papers will be located under the SE Research link on Blackboard and labeled by week. You are to read these papers and the Sommerville text chapter before the class period, not after. There will be a submission link...
for your summaries. A general rule of thumb will be 1 page of summary for each 10 pages of a paper. These papers are also fair game for quizzes and graded problem sets.

**Grade Appeals**
Students have the right to appeal a grade, but only in writing. Submit your appeal with the graded lab/quiz/exam, stating the reason for your appeal. All appeals must be turned in no later than one week after the material has been returned in class.

**Computer and Software Support**
As a 1st year graduate class, you are expected to be proficient in administering your own computing environment. You will be installing various tools throughout the semester, and deploying software to both your own local resources and servers I provide. We will be using a significant amount of class time for hands on activities, so a laptop is beneficial. However if you do not have a laptop ASU general computing facilities will be sufficient to complete all course activities.

**Cheating and Ethics Policy**
Cheating is strictly forbidden in this class. Cheating is defined as “presenting someone else’s work as your own”. In this class, any cases of suspected violations will be turned over to the Dean’s Office of the Fulton Schools of Engineering who will track violations and determine additional actions. Sanctions may include an E or EX grade in the course. Students should review the FSE student honor code ([http://engineering.asu.edu/integrity/honor-code/](http://engineering.asu.edu/integrity/honor-code/)) and are encouraged to take the honor code pledge. Students are expected to follow ASU’s Academic Integrity Policy, [https://provost.asu.edu/academicintegrity](https://provost.asu.edu/academicintegrity).

**The penalty for cheating in this class is immediate failure of the course. There will be no warnings or exceptions.**

A special case of cheating, but no less problematic, is plagiarism. Plagiarism is copying or paraphrasing another’s work, such as a paper or program source code (usually a paper or online posting,) without proper attribution to that source. ASU makes use of plagiarism detection tools, so do not plagiarize. Further, do not submit papers with over 20% of the work in “direct quotes” as a means to avoid plagiarism. Your ideas and your work should be original; citations are used to inform your work.

**Ethics violations in this class will be treated as a cheating violation and result in immediate failure of the course.**