CS 4733: Project Management
Fall 2012, Course Syllabus

CS 4733: Mon./Wed. 4:00-5:15pm in MS 2.02.55

Instructor
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Course Description and Goals

Introduction to principles and best practices for software project management. Topics include software process models, capability maturity model, metrics, cost estimation, software project planning, risk management, software configuration management, people management, and software management CASE tools.

This student is not intended to be sufficient preparation for a student to be able to manage commercial software projects. Rather it is to be intellectual inquiry into the challenges of bringing a software projects to a successful completion within a budget and some of the practices, processes, and tools that are available to a manager and their team to make a project successful. Students will also learn to carry out certain tasks useful for project management.

Among the questions that will be examined include:

- How are software projects different than other kinds of projects?
- What is the basis for the argument that the "software crisis" is caused by lack of discipline? What is the basis for the argument that the "software crisis" is the result of failure to acknowledge that requirements change? Which explanation do you find more persuasive?
- What are some processes that can be followed available and for supporting software projects and how can they be utilized in the management of software? In what situations are they appropriate?
- What are some tools available and for supporting software projects and how can they be utilized in the management of software?

At the end of the semester, students should be able to formulate well-reasoned answers to these questions citing appropriate material from the course as the basis for their reasoning.

Prerequisites

The prerequisites for this course are:
• CS 3443: Application Programming (new catalog), OR
• CS 3773: Software Engineering (old catalog)

Textbooks

There are two textbooks for this course that each offer a different perspective on how to manage software projects. The first is “Applied Software Project Management” by Stellman and Greene. The second is, “Agile Project Management with Scrum” by Schwaber.

Students should expect to need both of these books in order to complete homeworks and classroom activities.

Course Outline

The topics to be covered this semester are expected to include:

1. Essence of Software Projects; What is special about Software Projects?
2. Traditional Approach
   (a) diagnosis: lack of discipline
   (b) planning
   (c) estimation
   (d) schedules
   (e) reviews
   (f) requirements
   (g) design, version control, JUnit, and refactoring
   (h) Testing
3. Agile Approach
   (a) diagnosis: changing requirements is part of the essence of software
   (b) management role
   (c) roles: Scrum Master, Project Owner
   (d) planning
   (e) reporting
   (f) scrum team
4. comparing Traditional and Agile
5. process improvement and the Capability Maturity Model
6. software tools

Grading

Final grades will be assigned using the weighted average of the following components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Participation</td>
<td>10%</td>
</tr>
<tr>
<td>Homework</td>
<td>10%</td>
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<tr>
<td>Tool Demonstration</td>
<td>20%</td>
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<tr>
<td>Midterm Exam</td>
<td>25%</td>
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<tr>
<td>Final Exam</td>
<td>35%</td>
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</tbody>
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A total score of 90% will earn an A, a total score of 80% will earn at least a B, a total score of 70% will earn at least a C, and a total score of 60% will earn at least a D. The instructor reserves the right, however, to lower the thresholds if the instructor determines that to be appropriate in order to calibrate the grading to the learning objectives and course difficulty.

**Attendance and Participation**

To receive full participation points, students must attend lecture and recitation regularly, be prepared for class (including completing assigned readings in advanced), and regularly participate in class discussions (by asking questions, answering questions, and presenting assigned material) or posting questions, answers, or comments on the piazza forum.

Students will be considered to attend classes regularly if their absences do not exceed 1/5 of the class meetings. Students will not be penalized for absences due to participation in university sanctioned activities. The instructor will not otherwise differentiate between unexcused and excused absences for which the instructor has been properly notified.

**Course web page and Piazza**

Information related to the course (including project information, homework assignments, tentative schedule, and exam dates) will be posted periodically at [http://www.cs.utsa.edu/~vonronne/classes/cs4733-f12](http://www.cs.utsa.edu/~vonronne/classes/cs4733-f12). In addition, there is a piazza discussion forum for the class at [https://piazza.com/class#fall2012/cs4733](https://piazza.com/class#fall2012/cs4733). Please, enroll in the course at piazza, and monitor piazza for announcements related to the course.

**Policies**

As a matter of policy, **late assignments will not be accepted**, but partial credit will be given for partially complete assignments and the lowest homework grade will be dropped in computing the final course grade. Exceptions may be made on a case by case basis.

Students are **expected to attend all lectures**. Although absences will not result in a direct grade penalty, students are responsible for knowing all material provided and announcements made during lectures. If a student finds it necessary to miss a lecture, they should find out what was covered from a classmate.

**Makeup Examinations and Incomplete Grades**

Makeup examinations and grades of Incomplete will only be considered by the instructor if there are serious extenuating circumstances (such as hospitalization or death of an immediate family member) that are beyond control of the student. Such circumstances need to be documented and discussed with the instructor as early as possible.

Student who miss more than 1/4 of the sessions in a semester are ineligible for an incomplete. Makeup exams may be in a different format and/or harder than the exam that is being made up.

**Scholastic Dishonesty**

Although discussions among classmates are encouraged, unless otherwise specified, re-
Responses to homework questions be formulated independently. Discussions of homework, however, are allowed on the course’s piazza forum.

Cases of academic dishonesty will be referred to Student Judicial Affairs. The UTSA’s Student Code of Conduct (http://www.utsa.edu/infoguide/appendices/b.html) contains a description of expected behavior and the potential penalties for scholastic dishonesty.

Roadrunner Creed

The University of Texas at San Antonio is a community of scholars where integrity, excellence, inclusiveness, respect, collaboration, and innovation are fostered.

As a Roadrunner, I will:

- Uphold the highest standards of academic and personal integrity by practicing and expecting fair and ethical conduct;
- Respect and accept individual differences, recognizing the inherent dignity of each person;
- Contribute to campus life and the larger community through my active engagement; and
- Support the fearless exploration of dreams and ideas in the advancement of ingenuity, creativity, and discovery.

Guided by these principles now and forever, I am a Roadrunner!

Accommodations

Students who have a disability that may impact your classroom performance are encouraged to contact Disability Services (http://www.utsa.edu/disability/). If accommodations are determined to be appropriate, please notify the instructor as early as possible.

Subject to Change

This syllabus is provided for informational purposes regarding the anticipated course content and schedule of this course. It is based upon the most recent information available on the date of its issuance and is as accurate and complete as possible. The instructor reserves the right to make any changes he deems necessary and/or appropriate. The instructor will make his best efforts to communicate any changes in the syllabus in a timely manner. Students are responsible for being aware of any such changes.

Corrected 8/29/12