CS/CEL 4750 Software Engineering II  
FALL 2015

General Information

**Instructor:** Richard Fry, PhD, Associate Professor, Department of Computer Science Weber State University  
**E-mail:** rich@richfry.com  DO NOT USE CANVAS E-MAIL  
**Office Hours:** Tuesdays and Thursdays 9:30AM-Noon (TE Building - 110K)

**Class Time:** Mondays and Wednesdays – Room TE 103D – Main Campus (7:30 AM - 9:20 AM)  
**Textbook:** Code Complete, McConnell (we will be referencing the book heavily this semester)  
**Pre-Requisite:** CS 3750  
**Website:** [http://canvas.weber.edu](http://canvas.weber.edu)

Course Description

In this course, we will continue to build upon the overall software engineering prototypes presented in CS 3750 (the pre-requisite for this course) while focusing on issues of software quality and software correctness, in particular. No matter how quickly or cheaply a piece of software can be developed, if it does not meet the needs for which it was intended, then the time and money spent on it have been wasted. However, achieving correctness of software can be very difficult. Since resources are typically limited, software developers must tailor their software quality efforts to the needs of each specific project. In this course we will focus heavily on Project and Time Management skills as well as incremental programming and testing principles, to fully implement the prototypes of the systems designed in CS 3750.

We will use a range of approaches to ensure on-time delivery of a quality software project (started in CS 3750), by examining project and configuration management and quality control through unit testing and software reviews.

There will be several graded progress checks (software reviews and individual feedback evaluations) throughout the semester. Additionally, this class has a CEL designer, meaning it is a community engaged learning class. Therefore, you are expected to spend at least 5 contact hours, over the semester, engaging directly with your client. These hours must be recorded and logged monthly via Weber Sync.

Course Delivery

There will be very few formal meetings with the professor. Rather students are expected to continue working with their teams on the project FINAL DELIVERY (no later than 11 December 2015). The professor will rotate his time and resources to meet with all three teams periodically during the semester. During these meetings, all students are expected to BE ON TIME and BE PREPARED with all their team members reporting. On other days, when students are not meeting with the professor (or their team), they may work on their own (in or outside of the designated class time). The final project is the key component of the course! Therefore, 100% team participation is expected.

Pluralsight and Instructor Led Training

All students in this class will be issued a full subscription to Pluralsight.com to brush up on new technologies your team may be trying to implement in your project. If your coding skills are deficient, or you want to learn something new, I STRONGLY RECOMMEND you set time aside to learn skills from experts, and get the answers you need. Pluralsight delivers world-class training that’s easy to comprehend and quick to learn. **This is a $49 per month value. Use it!**

In addition, I will be providing optional in-class training on technologies (like ASP.NET, C#, etc), as requested (see calendar) to support the success of your project. Bottom line, however, is that you need to take control of your own learning using the tools, resources (and other students) at your disposal. You are seniors now – use your initiative.
## Evaluation

Your final grade will be based on the following group assessment.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Points / % of Final Grade</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4 Progress Meetings with Dr. Fry (Group)</strong></td>
<td>75 Points (15%)</td>
<td>You will be awarded points for attendance and must participate in these Progress Report meetings to receive full credit. During these meetings I will grade heavily on TEAM PERFORMANCE, TEAM ACCOMPLISHMENTS AND OVERALL PROGRESS TOWARDS THE PROJECTS GOALS (established during the previous meetings). During these Progress meetings, your team will need to BE PREPARED to specifically show what has been accomplished since the last meeting, and perhaps review the code. We will go over the remaining tasks, timeline, obstacles, individual responsibilities, and objectives for the next meeting. <strong>ALL team members are expected to participate and individually report.</strong> You must account individually for ALL your hours (towards the project itself, as well as meetings with the client). <strong>If there are any underlying concerns or PROBLEMS – this is the opportunity to address them – out in the open – before moving forward!</strong> Depending on the severity of the problem / concern, I will suggest readings from the book, tutorial resources, and/or schedule follow up instructor led training, if necessary to ensure the project stays on track.</td>
</tr>
<tr>
<td><strong>3 Project Deliverables and Presentations with Dr. Fry and the client (Group)</strong></td>
<td>250 Points (50%)</td>
<td>Each deliverable should be aligned with specific functional requirements, requested by the client. Software should be tested prior to releasing to the client. Client is responsible for working with Versions 1 and Version 2, to provide feedback. For the final version, I will be evaluating if the team did what they set out to do? Did the team PROFESSIONALLY deliver a TESTED product? Was the acceptance deadline met? Was the customer satisfied? Would they have paid for the software? Was it that good? Was there enough training and documentation – or did you deliver it at the last minute? Your final grade will be based on the overall success/failure (and my interviews with the client) during the release period and at the end of the semester.</td>
</tr>
<tr>
<td><strong>Instructor Discretionary Points and Performance Reviews (Individual)</strong></td>
<td>75 Points (15%)</td>
<td>Instructor will adjust individual grades based on overall performance of the individual as observed by the instructor. This includes, but is not limited to professionalism, maturity, communication, on-time attendance, participation in meetings (both with instructor and client), accepting the role of supervisor (bonus points), time management, etc.</td>
</tr>
</tbody>
</table>
| 3 Supervisor Reviews (Individual) | 75 Points (15%) | Instead of peer reviews, all teams will need to designate and assign two subgroup supervisors / task leaders between each of the 3 Project Deliverables. These supervisors can remain the same all semester, or you can rotate. Either way, a supervisor should be a SENIOR coder or have the most understanding of how to manage the code and testing. Each non-supervisor member will work directly under one of these two individuals, and will have specific tasks that he/she is responsible for. Supervisors will conduct transparent feedback reviews one-on-one with all members they are responsible for. Members are encouraged to keep a “timecard” of their specific work / contributions.

Reviews are not expected to be “perfect”, but rather provide an opportunity for improvement. Reviews will be “averaged” with the highest team performers establishing the baseline (“A”). Individual ratings which meet the team standard will receive an "A" for their supervisor review grade. Conversely, those students falling short of the standard will receive a lower grade.

Dr. Fry will review the supervisors’ performance, and solicit informal feedback from the subordinates. |
| Recording and submitting CEL Hours (Individual) | 25 Points (5%) | Official CEL hours need to be recorded whenever you PHYSICALLY (or virtually) meet with the client (train them on-site, present to them, set up or install hardware/software, etc.). DO NOT record any hours except those that DIRECTLY INVOLVE the client. Like last semester, **you MUST REGISTER with the CCEL and record these hours.** I will get a report from the CCEL showing total hours you submitted each month. I encourage you to record frequently. Remember, you are responsible for REGISTERING with the CCEL, getting the CLIENT to sign off your hours (through e-mail). If you do not register with the CCEL and get them electronically signed by your client, your hours will not be reported to the instructor. Monthly submission deadlines are Oct 7, Nov 7, and Dec 7. You must have at least 5 hours (1% per hour) by 7 December. **Thailand students cannot “double dip” their physical hours in Thailand as they are getting contact hours for CS 4830 credit already.** |
| TOTAL 500 Points Possible - It’s easy to figure your grade at ANY TIME during the course, just divide your current points by possible points (to date). | 500/100% | **Grading Scale**

<table>
<thead>
<tr>
<th>Points</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>473-500</td>
<td>A</td>
</tr>
<tr>
<td>448-472</td>
<td>A-</td>
</tr>
<tr>
<td>438-447</td>
<td>B+</td>
</tr>
<tr>
<td>410-437</td>
<td>B</td>
</tr>
<tr>
<td>398-409</td>
<td>B-</td>
</tr>
<tr>
<td>388-408</td>
<td>C+</td>
</tr>
<tr>
<td>360-387</td>
<td>C</td>
</tr>
</tbody>
</table>

A Student with less than 360 points will not pass the course |
Schedule (Subject to change – Please see the LIVE calendar on course website)

Monday 8/31 – PRESENTATION DAY - Introduction / Project Assignments
Wednesday 9/2 – PRESENTATION DAY - Version Control Architecture – Class Diagrams Review

Monday 9/7 – NO CLASS - LABOR DAY
Wednesday 9/9 – MANDATORY (ALL) - Progress (Planning) Report Meeting 1

Monday 9/14 – NO CLASS. Thailand Group – In Thailand.
CCS and MS Groups - Pluralsight Training Videos (as assigned) and/or meetings with client.
Wednesday 9/16 - NO CLASS. Thailand Group – In Thailand.
CCS and MS Groups - Pluralsight Training Videos (as assigned) and/or meetings with client.

Monday 9/21 - NO CLASS. Thailand Group – In Thailand.
CCS and MS Groups - Pluralsight Training Videos (as assigned) and/or meetings with client.
Wednesday 9/23 – PRESENTATION DAY - Unit Testing / Test Plans

Monday 9/28 – MANDATORY (CCS) Progress Report Meeting 2 with Dr. Fry
Wednesday 9/30 – MANDATORY (MS) (Thailand in evening) Progress Report Meeting 2 with Dr. Fry

Monday 10/5 – OPTIONAL Instructor led training in class / assistance as needed in class
Wednesday 10/7 – OPTIONAL Instructor led training class / assistance as needed in class

Monday 10/12 – MANDATORY (CCS) (Thailand in Evening) First Deliverable Meeting with Client
Wednesday 10/14 – MANDATORY (MS) First Deliverable Meeting with Client

Monday 10/19 – OPTIONAL Instructor led training / assistance as needed
Wednesday 10/21 – OPTIONAL Instructor led training / assistance as needed

Monday 10/26 - MANDATORY (CCS) Progress Report Meeting 3 with Dr. Fry
Wednesday 10/28 – MANDATORY (MS) (Thailand in evening) Progress Report Meeting 3 with Dr. Fry

Monday 11/2 – MANDATORY (ALL) Unit Testing Day
Wednesday 11/4 – OPTIONAL Instructor led training / assistance as needed

Monday 11/9 – MANDATORY (CCS) (Thailand in Evening) Second Deliverable Meeting with Client
Wednesday 11/11 – MANDATORY (MS) Second Deliverable Meeting with Client

Monday 11/16 – OPTIONAL Instructor led training / assistance as needed
Wednesday 11/18 – OPTIONAL Instructor led training / assistance as needed

Monday 11/23 – MANDATORY (CCS) Progress Report Meeting 4 with Dr. Fry
Wednesday 11/25 – MANDATORY (MS) (Thailand in evening) Progress Report Meeting 4 with Dr. Fry

Monday 11/30 - MANDATORY (ALL) Unit Testing Day
Wednesday 12/2 – MANDATORY (ALL) Unit Testing Day

Monday 12/7 – MANDATORY (CCS) (Thailand in Evening) FINAL Deliverable Meeting with Client
Wednesday 12/9 – MANDATORY (MS) FINAL Deliverable Meeting with Client
Monday 12/14 – WRAP UP and EXTENSIONS (if necessary) GRADUATION PIZZA PARTY!