Texas Tech University
Department of Computer Science

Course Name: Senior Capstone Project   **Number:** CS4366
Section: 001   **Semester**: Fall 2015

Instructor Name: Cong Pu   **Office:** 304 ENGCTR   **Email:** cong.pu@ttu.edu
Office Hours: 3:30pm-5:00pm (Thursday, Friday) or by appointment

Class room: 204 ENGCTR   **Class Hours:** 12:30pm-1:50pm (Tuesday, Thursday)

Catalogue Listing: A project-oriented course intended not only to consolidate most theoretical aspects of software engineering, but also to emphasize team work and foster communication skills. Projects are formulated, formally proposed, designed, implemented, tested, documented, and demonstrated. (Writing Intensive)

Textbook: None

Course objectives: The objective of this course is to develop a project for a semester long using software engineering theories, methods, methodologies, and tools. Students will develop a team-based project through software development lifecycle

Key Topics:

- Proposing a project
- Specifying Requirements for a project
- Designing a project
- Implementing a project
- Testing code for a project

Course Prerequisites: CS 3365, 3364, and COMS 3358 or ENGR 2331

Expected prior knowledge and skills in: The successful student will be well-versed in software engineering and programming skill.

Learning Outcomes & Assessment Methods: Students who have completed this course should have the ability to:

Objective	ABET Outcomes	Assessment Methods
1. To communicate effectively with project stakeholders (BS7)	d, f	Report, Presentation
2. To Write effectively and clearly through project documentation (BS7)	f	Report, Presentation
3. To develop project management leadership skills (BS6)	d	Report, Presentation
4. To practice professional software development competencies (BS2, 4)	e, k, h	Exam, Report, Presentation

Grading Policy: The final grade for this course will be based on the following categories:
- Attendance: **10%.**
    - Each 1 point penalty will be given to each missing after the first two absences.
    - You will be counted as absence if you are 10 minutes late.
- Exams: **30%**. (mid-term exam: 15 %, final exam: 15%)
    - Students are required to **take exam on exam date**. There is no make-up for missing exam.
    - Exam could be removed if the students' performance is well. But this will be decided by instructor.
- Final report and deliverables: **35%**.
- Progress Presentation: **20%**.
    - Proposal
    - Analysis/design
    - Prototype
    - Implementation/testing
    - Final presentation
- Presentation Attitude: **5%**.

- Extra credit could be assigned to students who contribute classes. This will be decided by instructor.
- The instructor reserves the right to explain the confusing issues.

- The usual grading scale will be used:
  A 90-100
  B 80-89
  C 70-79
  D 60-69
  F Below 60

Ethical Conduct: Although students are encouraged to discuss ideas and problems with the TA, instructor and other students, academic dishonesty will not be tolerated. **It is your responsibility to educate yourself about actions that constitute academic dishonesty**. If you are not sure whether a specific action is allowed, contact the instructor and/or the TA before you indulge in it! All submitted homework will be randomly checked for plagiarism. Academic dishonesty of any kind, if discovered, will result in a grade of 0 for the corresponding assignment. Any student who is caught indulging in academic dishonesty more than once will lead to a grade of "F" in the course, and further action according to the TTU operating procedures: http://www.depts.ttu.edu/opmanual/OP34.12.pdf

Classroom Civility:
All violations of classroom civility will be reported to the Student Judicial Programs. The Texas Tech University Catalog states: "Students are expected to assist in maintaining a classroom environment that is conducive to learning." In order to ensure that all students gain from time spent in class, **students are prohibited from engaging in any form of distraction**, e.g., reading newspapers (or other articles), working on other courses, and using cell-phones or laptops for calls or messages. If you indulge in any such inappropriate behavior (without explicit consent of the instructor), you will (at the very least) be asked to leave the classroom.

Student with Disabilities:
Any student who, because of a disability, may require special arrangements in order to meet course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note that instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services Office in 335 West Hall or 806-742-2405.

Course Schedule: This schedule is tentative and subject to change.
 All changes will be announced in class or on the course website (Blackboard). Students
are responsible for making sure they are informed about announcements.

- Aug 25:   Introduction
- Aug 27:   Project Topics Introduction, Team Organization

- Sep 01:   Project Discussion, Formalizing Projects
- Sep 03:   Professional Software Development (**Lecture**)

- Sep 08:   Software Process (**Lecture**)
- Sep 10:   **Project Proposal Presentation**
  - ➢   Project Proposal **Document** Due on **11:59pm Sep 09**
  - ➢   Project Proposal **Presentation Slides** Due on **11:59pm Sep 09**

- Sep 15:   Agile Methods (**Lecture**)
- Sep 17:   Requirements Engineering (**Lecture**)

- Sep 22:   Requirements Engineering (**Lecture**)
- Sep 24:   System Modeling (**Lecture**)

- Sep 29:   **Requirement Specification/Analysis Presentation**
  - ➢ Requirement **Document** Due on **11:59pm Sep 28**
  - ➢ Requirement **Presentation Slides** Due on **11:59pm Sep 28**
- Oct 01:   Software Design (**Lecture**)

- Oct 06:   Software Design (**Lecture**)
- Oct 08:   **Design Presentation**
  - ➢ Design **Document** Due on **11:59pm Oct 07**
  - ➢ Design **Presentation Slides** Due on **11:59pm Oct 07**

- Oct 13:   **Mid-term Exam**
- Oct 15:   Implementation (**Lecture**)

- Oct 20:   Implementation (**Lecture**)
- Oct 22:   **Implementation Technique Presentation and Prototype Demonstration**
  - ➢ Implementation Technique and Prototype **Document** Due on **11:59pm Oct 21**
  - ➢ Prototype **Source Code** Due on **11:59pm Oct 21**
  - ➢ Implementation Technique and Prototype **Presentation Slides** Due on **11:59pm Oct 21**

- Oct 27:   **No Class** (Out of town for conference)
- Oct 29:   **No Class** (Out of town for conference)

- Nov 03: **Implementation Update Presentation**
  - Implementation Updates **Presentation Slides** Due on **11:59pm Nov 02**
- Nov 05: **Implementation Update Presentation**
  - Implementation Updates **Presentation Slides** Due on **11:59pm Nov 04**

- Nov 10: Software Testing (**Lecture**)
- Nov 12: Software Testing (**Lecture**)

- Nov 17: **Implementation Update/Testing Presentation**
  - Implementation/Testing **Presentation Slides** Due on **11:59pm Nov 16**
- Nov 19: **Implementation Update/Testing Presentation**
  - Implementation/Testing **Document** Due on **11:59pm Nov 18**
  - Implementation/Testing **Presentation Slides** Due on **11:59pm Nov 18**

- Nov 24: Thanksgiving Holidays
- Nov 26: Thanksgiving Holidays

- Dec 01: **Final Project Presentation**
  - Final Project Document **Presentation Slides** Due on **11:59pm Nov 30**
- Dec 03: **Final Project Presentation**
  - Final Project **Document** Due on **11:59pm Dec 02**
  - Application **Source Code** Due on **11:59pm Dec 02**
  - Final Project Document **Presentation Slides** Due on **11:59pm Dec 02**

- Dec 04: **Final Exam, 10:30 am – 1:00 pm**