CSCI 435/535 Software Engineering

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CSCI 435/535 Software Engineering

3 Credits, Prerequisite: CSCI 301, CSCI 312

From the catalogue: "The software life cycle. Software design methodologies. Testing and maintenance. Programming teams."

Course objective: The Course will cover topics in software engineering such as: software life cycle, software requirement analysis, software system design, software implementation and testing, software maintenance, team programming, etc. Check the class schedule for more details.

Course format: This course is about learning "book knowledge" along with "hands-on experience". Students are required to read assigned material before class and ask questions and/or comments about the material. The course will consist of daily lectures on Mondays, Wednesdays, and Fridays. Some Friday class meetings will be related to the particular software project which we will be working on. Friday meetings may involve short informational presentations, inter-group communication and status reports, and elevation of issues.

Project and assignments: Team projects will be undertaken by students. Details will be given out in the second week of the course. This project will provide an environment where the concepts learned and discussed during the lectures can be applied. The project will be multi part and a number of work products are to be produced and graded. A complete schedule of deadlines will be given within the two weeks of classes. Students will work on the project in groups of three or four students.

Programming environments: Departmental programming environments consist of Java used within Linux operating system (the students are also allowed to use Java or C++ based programming environments on their personal laptops). If you do not have departmental computing account, apply immediately. All programming, documentation, and project demos are done in this environment and it is the responsibility of students to acquire accounts and all necessary skills.

Description:
It is assumed that students already have programming experience. This knowledge will be tested in a quiz on Friday January 18th during the class. This course will not devote much time to coding, debugging, or other basic software knowledge which the student should have acquired earlier in the curriculum (CS 301). Instead, it will focus on the problems, design,

techniques, and tools which are involved with the development of large software systems by groups of people;
A significant portion of this course will be devoted to a project which students will complete outside of class. Note that students may need to devote significant time to the project during "crunch time" prior to a deadline;
This course is cross-listed as CSsi 535. If you are a graduate student with significant software development experience, you are advised to take CSsi 635 or CSci 780 instead.

Prerequisites:
CSsi 301 - Software Development
CSsi 312 - Principles of Programming Languages
Solid individual programming skills (Java, C++, and/or Python)

Reading materials:
Required: Reading materials (papers, lecture slides, links in the schedule) on the course website
Suggested: Software Engineering (8th or 9th Edition) by Ian Sommerville
Suggested: Code Complete (2nd Edition) by Steve McConnell (ISBN: 0735619670)
Available from SWEM library: https://catalog.swem.wm.edu/Record/3302723
Online version: http://proquest.safaribooksonline.com/0735619670

Instructor

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Where and When

Class: 11.00-11.50 am, MWF, Washington Hall 317

Office hours: Monday 2-4 pm, Thursday 2-4 pm, and other hours by appointment

Reading materials

Required: Reading materials (papers, lecture slides, links in the schedule) on the course website

Suggested: Software Engineering (8th or 9th Edition) by Ian Sommerville

Suggested: Code Complete (2nd Edition) by Steve McConnell (ISBN: 0735619670)

Online version: http://proquest.safaribooksonline.com/0735619670

Important dates:

1/29	Project preferences are due
2/24	Midterm exam
3/1 – 3/9	Spring break, no classes
3/21	Graduate Research Symposium
4/18, 4/21	New technology student presentations
4/23, 4/25	Final project presentations
4/??	Final exam
5/2	Projects and reports are due

Required work and grading:

Midterm exam:	10%
Final exam:	20%
Homework:	15%
Random quizzes:	5%
Class project:	35%
Report from Graduate Research Symposium	5%
New technology overview presentation	5%
Final project presentation:	5%
Extra points (projects, home-works):	10%

Active class attendance: This is a course that requires you to be present and to actively participate.

Late work policy

All written assignments must be handed in before each class. If you have a compelling and documented reason for not being able to meet the deadline, you must make the alternative arrangements before the due date.

Attendance

It is expected that students attend all classes.

Students who need accommodation

Please see me after class or send email to set up a brief meeting.

Information Dissemination

I will maintain a set of web pages beneath http://www.cs.wm.edu/~kemper/cs435/ in support of the course. This includes a Wiki and Piazza forum for class discussion. The Piazza system is highly catered to getting you help fast and efficiently from classmates, the TAs, and myself. Rather than emailing questions to the teaching staff, I encourage you to post your questions on Piazza. If you have any problems or feedback for the developers, email team@piazza.com.

Find our class page at https://piazza.com/wm/spring2014/csci435/home