Software Development — CPTR 221

Monday, Wednesday, Thursday, Friday, 1:00 – 1:50 PM

Instructor : Raheel Ahmad

Contact

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Office hours

- Tues: 9:00 - 12:00 am; Thu: 10:00 - 12:00 am
- Besides the above, feel free to drop in at any time if I am in office. Otherwise, send me an email so we can setup an appointment.

Textbook

- Software Engineering, 8th edition, by Ian Sommerville (Addison Wesley; ISBN 0321313798)
  - http://www.cs.st-andrews.ac.uk/~ifs/Books/SE8/index.html
- Supplemental reading material will be provided as the class progresses

Course description and objectives

Software engineering is usually understood as the profession of developing and maintaining software. This course will introduce the students to the theoretical and practical aspects of this profession with an emphasis on contemporary practice. We will study the application of systematic methodologies and tools in the software design cycle. Students will learn the software engineering processes as applied to the design, implementation, and verification of software. As software engineering is a skill that can only be learned with practice, the course will focus on applied learning: processes, tools and workflows that are relevant to the current practice of software development. The semester-long project will serve as the showcase of the student's learning.

Topics covered

- Software processes
- Requirements engineering
- Object-oriented design
- Real-time systems
- User interface design
- Software testing techniques
- Model checking for verification

Coursework and evaluation

Course evaluation will consist of homework **assignments**, **quizzes**, **midterm and final exams**, and a semester-long **project**. The project will be the major focus of the course and you should start work as early as possible. Several assignments will actually be the submission or presentation of a module of your project. Follow the due dates for each assignment submission strictly. Assignments should be handed in **at the beginning of the class**. Any assignment that is submitted later than that will incur a 50% penalty. Missing an assignment submission, quiz, or exam will result in a zero score unless there is a provable extenuating circumstance.

Academic dishonesty and plagiarism

Your success in this course (and in general) depends greatly upon your integrity. Any activity that compromises your academic honesty will not be tolerated. Cheating and plagiarism will result in your automatically failing the class. Cheating is deliberate by definition. Plagiarism may not be deliberate but it *will* lead to a serious penalty regardless. Therefore, a simple guideline to follow is: when quoting another source, acknowledge it fully by citing it in the text somewhere. Also, presenting someone else's work as one's own is sure grounds for failing the course. If you are in any doubt, please discuss with me before making a final submission. Please read the MC Source Handboook for more information on academic dishonesty.

Grading policy

Coursework weightage

Term Project	30%
Assignments	30%
Quizzes	10%
Midterm Examination	15%
Final Examination	15%

The grading scale

A : 93%
A- : 90%
B+ : 87%
B : 83%
B- : 80%
C+ : 77%
C : 73%
C- : 70%
D+ : 67%
D : 63%
D- : 60%

Disability Statement

Manchester College, in compliance with federal guidelines, is committed to assuring students with disabilities equal access to programs and activities that are provided to students without disabilities.

Any student who feels s/he may need an accommodation based on the impact of a disability should contact Bonnie O'Connell, the director of services for students with disabilities, to establish eligibility and to coordinate reasonable accommodations. It is the student's responsibility to self-disclose their disability. Students whose accommodation requests are approved will be provided with confidential letters to deliver to their professors which verify the nature of the student's disability and documents the need for auxiliary aids and services and/or academic adjustments/accommodations. Students are encouraged to meet with each professor early in the semester to discuss the academic implications of the disability as they relate to the specific course and to request appropriate accommodation. The Disabilities Office is located in the Success Center (second floor of the Union) telephone 982.5076 to schedule an appointment.