CMSC 461: Senior Capstone in Computer Science

15th of January, 2020

Lecture:	MWF 10:00-10:50am, Ruffner 356
Website:	`http://cs.longwood.edu/courses/cmsc461/s20/`
Professor:	Julian Dymacek
Office:	Ruffner 342
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Email:	dymacekjm@longwood.edu

Office hours:

MTF: 11–12pm
W: 1–2pm
by appointment or the door is open

Course Description

A capstone course designed to consolidate experiences from a variety of other courses by working in groups on one or more large projects. Principles of software engineering will be covered, including traditional and object-oriented software design, software lifecycle models, software analysis, and management implications. The implementation of developing software using teams will be stressed along with various software tools. Reusability, portability, and interoperability will be discussed. A segment on assessment will be included. 3 credits. **This course is Speaking Intensive**

Prerequisites

Senior standing, CMSC 262 and CMSC 208.

Course Objectives

At the end of this course, the successful student will be able to:

1. identify and explain various aspects of the software creation process;

2. identify, explain and apply different mechanisms for software design;

3. identify, explain and use tools for software design, implementation, and testing;

4. explain how topics from other courses in the curriculum impact software creation;

5. speak in formal and informal settings regarding technical aspects of the software creation process.

Textbook and Resources

No required book. Some readings maybe provided and links will be provided on the course website.

Course Structure and Student Expectations

You should expect to spend on average about 9 hours of your time every week on this course, including class and lab time as well as reading, practice, homework, and projects.

Course Requirements

Tentative Course Schedule

Week	Date	
1	Jan. 14-17	Introduction; Software process
2	Jan. 21-24	Tools; Large project management
3	Jan. 27-31	Requirements
4	Feb. 3-7	Proposals
5	Feb. 10-14	Design
6	Feb. 17-21	Prototypes
7	Feb. 24-28	Projects
8	Mar. 2-6	*Spring Break*
9	Mar. 9-13	Presentations
10	Mar. 16-20	Presentations
11	Mar. 23-27	Testing
12	Mar. 30- Apr. 3	Presentations
13	Apr. 6-10	Documentation
14	Apr. 13-17	Presentations
15	Apr. 20-24	Acceptance testing
15	Apr. 27-28	Project presentations
	May 5	**Final Exam:** Tuesday 3:00-5:30pm

Important university dates

Jan. 22	Last day of Add/Drop (5pm)
Feb. 21	Last day for Pass/Fail (5pm)
Mar. 31	Deadline to withdraw with "W"
Apr. 29	Last day of classes

Grading Scale

		A	100–91	A–	90
B+	89	B	88–81	B–	80
C+	79	C	78–71	C–	70
D+	69	D	68–61	D–	60
		59 and lower is an F			

Graded work

If you are stuck on something talk to me sooner rather than later. The entire course is cumulative so you cannot afford to get behind.

Homework & Quizzes: You are expected to be an active participant in the class. You should be present and engaged. Pop quizzes will be given in class and cannot be made up.

Project: There will be a semester long group project. The project grade will include several smaller assignments and checkpoints.

Presentations: Each person will be expected to present at least once during the course. The presentation will be graded using the department rubric. Presentation topics will be announced in class.

Final Exam: There will be one exam, the MFT, which will be taken during the regular exam time.

Breakdown

Final Exam (MFT):	15%
Semester Project:	50%
Presentations:	20%
Quizzes & Participation:	15%

Policies

For a list of campus wide polices please see:
   `http://www.longwood.edu/academicaffairs/syllabus-statements/`

Honor Code

We will follow the Longwood Honor Code in this class. When completing work please do not lie, cheat, or steal.

1. Do not lie and claim someone else's ideas as your own: you must give proper attribution

2. Do not cheat and copy work from another student or the Internet

3. Do not steal someone else's work and submit it: your files are to be written by you

4. YOU are responsible for securing YOUR code/work: do not let someone else have access to your work/files

If you are unsure if your action will violate the honor policy: DON'T DO IT. Feel free to talk with me if you have questions.

   Infractions of these policies will be dealt with harshly under the Longwood Honor Code with cases turned in to the Honor Board. Any student convicted of an honor offense involving this class will automatically receive a lowered *final course grade*, potentially severe as an **F**. You should consider all work in this class to be pledged work, whether or not the pledge appears on the assignment.

Support

Programming (and mathematical proof) is a different way of thinking about problem solving. A solution is not necessarily easy or obvious. I strongly encourage you to follow along with the class in readings and activities. When you have questions, ask. In addition to my regular office hours, you can always email to schedule a time to meet. If my office door is open feel free to stop by, if my door is closed I'm not available.

Attendance and late work

You are expected to attend and participate in class. Attendance will be recorded in every class. In accordance with campus policy, missing more than 10% of scheduled class time to unexcused absences may, at my discretion, result in the loss of one letter grade. Missing 25% of class or more, whether excused or not, may result in an automatic failing grade.

Late work will not be accepted outside of exceptional circumstances such as serious medical or family emergencies. Most extensions will require a note from a Longwood administrator.

Laptops and other electronic devices are not to be used during class, except with permission. No food in class.

Inclement weather policy

I don't plan to cancel class for weather unless the entire college shuts down. If extenuating circumstances cause me to cancel class, you will be notified by e-mail.