Computer Science 2720
Software Engineering
MWF 11:00 – 11:50

Instructor: Dr. Stephen Hughes
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Office Hours:
Monday 12:30 – 1:30
Thursday 11:00 – 12:00
By Appointment or Open Door
ITTC 317

COURSE DESCRIPTION

Developing software is fundamentally different from writing programs. While programming expertise is a critical skill, the ability to produce software that is useful, usable and accepted by a broad audience requires much more to be successful.

This course will expose you to some of intricacies of developing Software. We will survey the field of software engineering, covering the life cycle of software, various development strategies, requirements analysis, design tools, and testing methodologies. These concepts will be explored in theory as well as in practice; you will gain experience in conceiving, specifying, designing, developing and implementing a reasonably sized software solution.

COURSE CONTENT

Materials

Various readings will be distributed via e-mail/e-learning system.

Optional Text: *Essentials of Software Engineering* 2nd ed. by Tsui and Karam (2009)
ISBN-13: 978-0763785345

Grading

Individual Assignments (30%) These assignments are meant to assess understanding of the current topics in class. They will take the form of problem sets, modeling, short coding activities, or reflections on a class reading. There will be approximately 3 to 5 assignments over the course of the semester.

Team Assignments (35%) A key element of this class is to experience the concepts of this course in the context of a substantial software development project. You will be assigned to a team of approximately four to five students to develop this software solution that extends beyond your personal needs. At regular intervals in the project, your group will be asked to submit project deliverables, or report on the current state of your efforts. There will be roughly 6-7 check-ins. Although it seems very important, implementation of working code is only **one** of these check-ins! You will receive more details on the expectations for each review at the start of each cycle.

> **Participation and Teamwork (% Multiplier):** The work product submitted by your team will be objectively given a score based on its quality. However, team members will regularly evaluate themselves and each other during the semester. The overall project grade will be subject to a fractional multiplier to account for lack of participation and teamwork.

Quizzes, Midterm & Final Exam (35%)
There will be a midterm exam and a comprehensive final exam. Both of these exams will include essay-style questions that will ask you to weigh-in on broad questions in the field of software engineering. It is also possible that short quizzes will be given periodically to gauge your progress in the course, ensure that you are keeping up with the pace of the class.

Letter grades will be assigned based on the following scale.

	$87 \leq$ B+ < 90	$77 \leq$ C+ < 80	$67 \leq$ D+ < 70	
$93 \leq$ A	$83 \leq$ B < 87	$73 \leq$ C < 77	$63 \leq$ D < 67	F < 60
$90 \leq$ A- < 93	$80 \leq$ B- < 83	$70 \leq$ C- < 73	$60 \leq$ D- < 63	

COURSE POLICIES

Prerequisite
As a prerequisite for this course, you are expected to have earned a grade of C or better in CS 1520 and CS 1800. If this is not the case, please contact me immediately.

Attendance Policy
Class attendance is vital to your success in this course; material covered during missed sessions is the responsibility of the student. Conversations held in class illuminate the published class materials and are subject to evaluation on subsequent quizzes and exams. Moreover, any in-class graded material (quizzes, classwork) missed will not be available for make-up.

Office Hours
Office hours are an opportunity for you to clarify details you may have missed in class. If you come to office hours with a problem on the assignment, you should come prepared to answer questions, as well as asking them. If you have questions regarding code, you also should come prepared with access to an electronic version of your work.

Academic Integrity
Honesty and integrity are qualities we value in ourselves and in others. Therefore, you are expected to be fully aware of your responsibility to maintain the highest degree of integrity in all of your work. It is accepted that you have read and understood the standards for academic integrity at the University of Northern Iowa, and will abide by these standards for this course.

Electronic Devices
As a courtesy to me and your peers, cell phones and other personal communication devices should be *turned off* or silenced prior to entering the classroom. If you wish to use your laptop during class, be sure that it is being used for activities that are directly related to the classroom discourse. *I reserve the right to change this policy at any point during the semester*.

Special Services
If you have special academic or physical needs requiring accommodations, please meet with me during my regular office hours or schedule an appointment as soon as possible. We need to discuss any accommodations before they can be implemented.

Late Work/ End of Course
All assignments are expected to be submitted on time. I understand that events sometimes conspire against us. If your work is going to be late, you should contact me in advance to ***negotiate*** a new deadline. Work that is submitted late without prior approval will not receive full credit; work submitted beyond two weeks of the deadline will not be accepted. This course officially ends with the scheduled Final Exam session. No work for this class will be accepted beyond that point