CSE308 Software Engineering

Course Information

<table>
<thead>
<tr>
<th>Semester:</th>
<th>Spring 2019</th>
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<tbody>
<tr>
<td>Time:</td>
<td>Monday and Wednesday, 5:30PM - 6:50PM</td>
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<tr>
<td>Location:</td>
<td>CS2120</td>
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</tbody>
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Text (recommended, but not required):

2. Head First Design Patterns

Contact Information

| Instructor: | Dr. Robert Kelly |
| E-mail:     | robkelly@cs.stonybrook.edu (be sure to include "CSE308" with no spaces, in the subject line of any e-mail message you send to me) |
| Office hours: | Tuesdays, 3:30PM-5:00PM  
Wednesdays, 2:15PM-3:45PM |
| Office location: | New Computer Science 218 |

Content

CSE308 introduces the basic concepts and modern tools and techniques of Software Engineering. It emphasizes the development of reliable and maintainable software via system requirements and specifications, software design methodologies including object-oriented design, implementation, integration and testing; software project management; life-cycle documentation; software maintenance; and consideration of human factor issues.

This is a project course, so you will be working in a team of 3-4 students to develop a complex system using the principles of software engineering. A single project will be available for all students.

For CSE majors, completion of CSE 219 (or CSE260), CSE320, CSE305 (or CSE306) are required to enroll in this course. You will also find that CSE333 and CSE336, although not required, provide some suitable background to CSE308. Depending on how many of these courses you have completed, you may need to spend more time working on the course project to understand the related database and user interface technologies.
Course Objectives

The outcomes for the course are:

1. An ability to perform project planning, requirements analysis, and system/test design.
2. An ability to work as a team to produce software systems that meet specifications while satisfying an implementation schedule.
3. An ability to produce professional quality oral/written presentations of system designs, reviews, and project demonstrations.

The course will also satisfy the following program objectives:

• (S1) design, develop, test, and evaluate software systems.
• (S3) apply their knowledge to the solution of practical and useful problems.
• (S4) communicate effectively.
• (S5) work collaboratively.
• (S7) have substantial exposure to advanced topics in software and computing systems.
• (S10) understand professional responsibility

Assignment Information

You are expected to work on the project as part of a small group (maximum of 4 students in a group).

The semester project includes a number of deliverables during the semester. Some of these are intended to ensure that you stay on track, while others are meant to provide feedback during the semester. For the "on-track" assignments, you can lose points on your project if the components are incomplete or late. A few project components are major milestones and will be graded, with the grade counting towards your final project grade.

You will submit assignments through a shared repository. Each group of 3-4 students will use a shared repository, accessed by members of the group along with your TA. The assignments are due at Midnight on the due date listed in the class Web site. However, TAs will not begin grading until the next morning, so if you submit it a few hours after midnight it will also be accepted.

Grades and Exams

This is a three credit graded course. Your final grade is based primarily on your project, but the grade is also influenced by your performance on the mid-term exam and a brief final exam, as well as your oral and written communications during class.

The components of the grade are:

• Mid-term exam - 25%
• Final exam - 10%
• Oral communications - 15%
• Project - 50%
The oral component of your grade is designed to reflect oral communications skills for you as a member of a software engineering development or research team. An important consideration in this part of the grade is that your grade cannot be reduced by any of your oral communication in class. You start at 0 points in this category, and your grade is increased when you show evidence of effective oral communications. These points are typically earned through "volunteer" presentations in class. The classroom is meant to be a safe way for you to learn the skills necessary software team communications. You will receive feedback on your communications in class, so that you can improve these skills. For any of your presentations, please let me know any time you would like additional feedback.

The project score is calculated as the weighted average of your scores for your 1) requirements (10%), 2) design review (30%), 3) code review (30%), and your 4) final project presentation (30%).

The mid-term and final exams will be closed book, however relevant reference material will be provided to you. The exams will be composed of some short answer questions, design documentation questions, and some programming questions. For these questions, your understanding of the concepts will be more important than your knowledge of the exact syntax.

Be sure to bring your student ID to all exams. The TAs will check your ID, and no one will be allowed to take an exam without the proper ID.

Be sure to be there for you assigned examination time since there will be no make-up exams.

The Pass/No Credit (P/NC) option is not available for this course.

TA

The class TAs are available to help you in understanding the material in many ways. They will provide hints and suggestions when they respond to your submission of a homework assignment. They may also be available in teaching sessions given in the Computer Science Teaching Lab.

The TAs and the instructor will be coordinating hints and instructions concerning the HW assignment through Piazza. Piazza is a Q&A platform designed to get you answers from classmates and instructors. It serves as a forum to allow you to collaborate and solve common challenges. You can post any questions you have or errors you may encounter, and we will post our answers on Piazza directly. You are also encouraged to answer any questions posted by your classmates. This way when an issue is resolved, everyone gets to benefit and learn from the answer.

We will also be posting assignment-specific instructions or notices on Piazza, so make sure you sign up. For the sake of academic integrity, you should avoid posting your actual code in the discussion forums. If you feel it is absolutely necessary, you can check either with the instructor or one of the TAs.

Academic Integrity & Behavior

As a student at Stony Brook, you have agreed to follow the university’s rules regarding academic integrity and appropriate conduct. You should read both the academic integrity information and procedures and the student code of conduct.

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person’s work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary.
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn.

Special Assistance

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, ECC (Educational Communications Center) Building, Room 128, (631)632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Student Accessibility Support Center. For procedures and information go to the following website: http://www.stonybrook.edu/ehs/fire/disabilities.

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.