

# CSE592 – Software Engineering

## Advanced Topics in Computer Science

### Spring 2016

<b>Lecture Meeting Time:</b>	Tuesday, Thursday (2:00pm to 3:20pm)
<b>Location (Lecture):</b>	Academic Bldg. #204
<b>Course Web Site:</b>	<a href="http://www.cs.sunysb.edu/~icyoon/teaching/cse592/cse592.html">http://www.cs.sunysb.edu/~icyoon/teaching/cse592/cse592.html</a>
<b>Instructor:</b>	Dr. Ilchul Yoon
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<b>E-mail:</b>	icyoon@sunykorea.ac.kr
<b>Office Hours:</b>	Wednesday, Thursday 3:30pm~5pm; or by appointment.

### MATERIALS

<b><i>Recommended:</i></b>
Software Engineering - A Practitioner's Approach (7th edition - international) Author: Roger S. Pressman Publisher: Mc Graw Hill ISBN-10: 0071267824, ISBN-13: 9780071267823
Foundations of Software Testing Author: Aditya P. Mathur Publisher: Pearson ISBN: 9788131716601
Introduction to Software Testing Author: Paul Ammann and Jeff Offutt Publisher: Cambridge University Press ISBN: 9780521880381
<b><i>Supplement materials:</i></b>

### COURSE DESCRIPTION

In this course, students will learn principles of software engineering, software development process, and techniques to design and test software systems. This course mainly covers software testing techniques, but also cover techniques for software engineers such as UML (Unified Modeling Language), design patterns, and object-oriented software development methodology to further improve students' understanding on software engineering.

## COURSE CONTENTS

Topics covered in this course include:

- Introduction to Software Engineering
- Software Development Process and Practices
- Object-Oriented Software Modeling and Design in UML
- Design Patterns
- Software Testing Techniques
- Software Process Improvement: CMMI
- Agile Software Development Methodology
- Software Specification and Model Checking

## LEARNING OUTCOMES

Students who complete this course successfully should be able to:

- Understand software development processes of organizations or teams
- Analyze user requirements and design S/W using object-oriented methodology in UML
- Understand Design Patterns and can apply the patterns in software development
- Apply object-oriented software design methodology in real-world application development
- Understand software process maturity model
- Apply software testing techniques in various software development stages

## COURSE COMPONENTS

### *Lectures*

The lectures will focus on discussing concepts with simple examples. Both lecture meetings will be in the classroom. The student will be responsible for all the material and updates presented and discussed in the lectures. The lecture notes will provide a base of knowledge on course contents.

### *Assignments*

- **Summary** of research papers in SE (List will be announced later.)  
Students will read 1~2 research papers for each class and submit short summaries of the papers. The summary must not be a simple copy-paste of the paper contents, and students will have to write a summary in their own words. 250-500 words are expected for each summary.
- **Presentation**  
Students will also present a few research papers in class. The number of presentations will depend on the number of students enrolled.
- **Technical research paper writing**  
Students are expected to complete writing a research paper at the end of the semester. Topics for the research papers will be later announced in class. The idea development, implementation, experiment, and writing have to be done **individually**. Students may present or submit their progress one or two times during the semester, and will also present their completed work at the end of the semester. **No late submission will be accepted.**

## ***Exam***

There will be **one exam at the end of the semester** for evaluating students' understanding on the topics discussed in lectures, and also all the contents of the papers in the reading list. The examination is **in class, open-textbook**. No extra time will be provided for late arrivals.

Make-up exams can only be offered in the event of documented emergencies. Written permission must be obtained **48 hours before** the exam if you cannot attend. In any event, make-up exams are only given at instructor discretion.

## **GRADING**

### ***Grading method***

Paper presentation	20
Paper summaries	20
Term-Paper work	30
<u>Final Exam</u>	<u>30</u>
Maximum Points Possible	100

### ***Final grades***

The following are indicative of how the points on the course would be mapped to a grade. This is only indicative and may be adjusted at my discretion.

A = 80%+, B = 60-80%, C = 0-60%

## **SCORE/GRADE APPEALS**

You must make the appeal in writing. However, score changes are at the discretion of the instructor and may be up or down based upon a complete review of the work in question. It is important to recognize that a grade reflects another person's judgment of your work. In this sense, all grading is subjective. Appealing scores is discouraged. Changing a few points on assignments rarely makes a difference in the final grade. Time is much better spent discussing and clarifying the information content presented in the course. In the event of disputes at the end of the semester, you will be required to produce the testing material in question.

In the case of a grading mistake (i.e., grade is posted incorrectly, grader did not give credit for an item that exists) you can always send me an e-mail, or come to my office (Administrative Building B421).

## **ACADEMIC MISCONDUCT**

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. Faculty members are required to report any suspected instances of academic dishonesty to the Academic Integrity Committee.

## **ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES**

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact the Department of Student Affairs, Campus Building A, Room 217, (032) 626-1132. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

## **CRITICAL INCIDENT MANAGEMENT**

SUNY Korea expects students to respect the rights, privileges, and property of other people. Faculty members are required to report to the Department of Academic Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn.

## **COURSE EVALUATION**

Your participation in the evaluation of courses through Course Evaluation System is a responsibility you hold as a student member of our academic community. The system will be open for you to complete your evaluations later in this semester. You can participate after logging in to the system with your NetID.

## **RIGHT TO CHANGE INFORMATION**

Although every effort has been made to be complete and accurate, unforeseen circumstances arising during the semester could require the adjustment of any material given here. Consequently, given due notice to students, the instructor reserves the right to change any information on this syllabus or in other course materials.