Syllabus
CSC 8350 – Advanced Software Engineering
Dr. Xiaolin Hu
Spring 2017

Time & Place
Friday: 1:00-4:25pm, Aderhold Learning Center 203

Instructor
Dr. Xiaolin Hu (Email: xhu@cs.gsu.edu)

Office Hours
Tuesday/Thursday, 1:00pm - 2:30pm, 25 Park Place Building, Room 746

TA
Nicholas Keller (nkeller4@student.gsu.edu), Office Hour: Monday, Tuesday 10-11:30am, 25 Park Place, 7th floor, Room 711

Web Page
http://www.cs.gsu.edu/xhu/CSC8350/csc8350.htm

Prerequisites
CSC 4350/6350 Software Engineering or equivalent.

Textbook
E. Gamma, R. Helm, R. Johnson, J. Vlissides, "Design Patterns", Addison-Wesley, 1995

Course Description
The aim of the course is to study and analyze advanced concepts, directions, principles and methodologies using the textbook, literature, and handouts that pertain to major goals, problems and issues in software engineering. The emphasis is to treat software design and system modeling in systematic and programmatic ways. The contents of the course are roughly divided into three parts: 1) Software reuse and design patterns. 2) System modeling and design as exemplified by FSM, Petri Net, and Discrete Event System Specification (DEVS). 3) Advanced research topics in software engineering. For the "advanced topic" part, students will review related literature and present the results to the entire class. The course will be conducted in a seminar format.

Objectives
To enable students to (1) comprehend and appreciate software reuse and design patterns; (2) understand a variety of advanced research topics in software engineering; (3) conduct literature research on specific topics and give professional presentations; (4) learn and employ cutting-edge software engineering tools (e.g., modeling tools, program analysis tools, testing tools) and understand their theoretic and/or methodological foundation.

Grading
The course will include two take-home midterm exams (part I and part II), a hands-on project (includes report and demonstration), and a review on an advanced topic of software engineering. Both the hands-on project and advanced topic review are group work (Note: the project group and review group may be different). The total grade is broken down as follows: midterm – 40% (part I: 45%; part II: 55%), advanced topic review – 32%, hands-on project – 18%, attendance – 10%. Both the hands-on project and advanced topic review require a presentation and a final report. The score for advanced topic review is broken down as: 60% presentation, 40% final report. The score for hands-on project is broken down as: 40% presentation, 60% final report. Attendance will be taken randomly and is mandatory for specific announced classes. The final letter grade will be determined based on the following criteria: (It may be adjusted at the discretion of the instructors) A 90 – 100; B 80 – 89; C 70 – 79; D 60 – 69; F 59 and below

Any work turned in late will receive a 20% penalty within three days of due date, and it will not be accepted after three days. It is the student's responsibility to check any given grade and make complaints within at most one week after the grades are announced. Grades will not be changed afterwards.

Policy on Academic Honesty
Students must work individually on exams without any assistance from persons or things. Any student found to be cheating on an examination will receive a score of 0 for that exam. It is the student's responsibility to protect work from copying. No outside help is permitted. If a book or paper is used, it must be referenced and not copied. Plagiarized work is determined solely by the professor and is graded solely at the professor's discretion.
Disruptive classroom behavior will not be tolerated. Cell phones must be turned off during the class time. See the student catalog for more information. Class participation is strongly encouraged, please ask questions, and make comments.

**Last Date for Withdrawal**
Tuesday, February 28, 2017

**Other**
Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, please take time to fill out the online course evaluation.

Students who wish to request accommodation for a disability may do so by registering with the Office of Disability Services. Students may only be accommodated upon issuance by the Office of Disability Services of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which an accommodation is sought.

**Disclaimer**
This syllabus provides a general plan for the course and deviations from this plan may be necessary during the duration of the course.