

CSCI 334: System Design

Syllabus – Spring 2008

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Course Description

A project-oriented study of the ideas and techniques required to design and implement a computer-based system. Topics include project organization, interface design, documentation, and verification.

Course Goals

- Design large software projects using patterns and other standard techniques
- Communicate both orally and in writing with clients, colleagues, and supervisors
- Effectively test software components
- Document specifications and code using standard tools
- Work in teams to design and develop software projects

Required Texts

In addition to the following required texts, supplementary readings will be given periodically during the semester.

- *The Pragmatic Programmer* by Andrew Hunt and David Thomas
- *Design Patterns in Java* by Steven John Metsker and William C. Wake
- *Introduction to Type and Teams* by Elizabeth Hirsh, Katherine W. Hirsh, and Sandra Krebs Hirsh

Graded Material

- Written Work – As a writing-intensive (WI) course, the bulk of the work will be in written form:
 - Journals – Informal journals will be used to explore ideas, primarily from the Pragmatic Programmer text.

- Homework – Traditional homework problems will be used to explore design patterns and other problem-based assignments. Answers to these homework questions will require written responses.
- Formal Writing and Presentations – Computer scientists communicate with colleagues, supervisors, and clients, each requiring different types of writing. Formal writing assignments and presentations will explore these areas.
- Project – The project for this course is a real-life application. As such, it is open-ended and has not been completed beforehand. This entails certain risks and challenges that we will navigate during the semester.
- Midterm – One midterm will be given during the semester. The date will be determined.

Grade Determination

- Journals – 25%
- Homework – 20%
- Formal Writing and Presentations – 20%
- Project – 25%
- Midterm – 10%

Responsibilities

Your attendance is expected at each class meeting. You are also responsible for the contents of reading assignments, handouts, class activities, and class email.

If you have a disability that may affect your participation in this course, please contact me immediately to discuss academic accommodations.

Academic Honesty

Except on the midterm, you are encouraged to discuss the material and work with other students in the course. This policy does not allow you to copy another student's work verbatim – you must produce your own write-up of the material. Work together to learn the concepts, but keep in mind that you are ultimately responsible for the material on the test.