CENG 443
Introduction to Object Oriented Programming Languages and Systems

Syllabus

• Instructor
  Asst. Prof. Selim Temizer, temizer@ceng.metu.edu.tr, http://selimtemizer.com

• Assistant
  Yusuf Mücahit Çetinkaya, yusuf.cetinkaya@ceng.metu.edu.tr

• Prerequisite
  Basic knowledge of object oriented programming paradigm, process/thread concepts, UML and SQL

• Course objectives/goals
  The objectives of this course are to enable students:
  - to use object-oriented programming concepts and constructs to represent software systems,
  - to understand the internal, architectural and usage aspects of the state-of-the-art methods and techniques to develop efficient, secure, robust, multi-threaded, networked, from standalone to enterprise-level object-oriented applications, and
  - to comprehend how to apply them practically.

• Grading (Tentative)
  Attendance and Participation  10 %  (Attendance will be weighted by pop quizzes)
  Assignments (3)            36 %  (Bonuses are always provided for extra work)
  Midterm                   26 %
  Final                     28 %

• Some References (No Required Textbook)
  B. Eckel. Thinking in Java. Prentice Hall.

• Important Notes
  - In order to be allowed to the final test, students should satisfy ALL of the following requirements:
    o Quiz weighted attendance grade should cover at least 80% of the lectures
    o Submit all of the assignments
    o Score at least 40 (out of 100) on each of the assignments
    o Score at least 40 (out of 100) on the midterm
  - Medical reports (METU approved) for missing lectures/deadlines should be submitted within 1 week.
  - Cheating on attendance, homeworks, tests, etc. is punished severely (disciplinary action is taken)!

• Outline (Tentative)
  Quick Review of OOP Basics with Java (primitives, expressions, statements, constructs, classes, objects, abstract classes, interfaces, inheritance, polymorphism, encapsulation, packages), Advanced OOP with Java (inner classes, exception handling, garbage collection, I/O streams, generics, new features), Reflection, Design Principles and Patterns, Threading Basics and Concurrency, Database Connectivity, Serialization, Remote Method Invocation, Virtual Machine Internals, Security, Overview of Enterprise Architectures.