

COP 4331 – OBJECT - ORIENTED DESIGN AND PROGRAMMING

- Summer 2011 -

Instructor

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Prerequisites

COP 3530, Data Structures and Algorithms Analysis

Textbook (Required)

Cay Horstmann, “*Object Oriented Design & Patterns*”, 2nd Ed., Wiley, 2005

ISBN 0-471-74487-5

Textbook webpage: http://www.horstmann.com/design_and_patterns.html

Class Time & Place

The class is offered online.

Office Hours:

By appointment. Students will communicate with their instructor via email and Blackboard tools, such as Discussion Groups.

Course Objectives

Help students understand and apply:

- the methods of object-oriented design and programming in the context of the software development cycle,
- the basics of Unified Modeling Language for analysis and design of object-oriented software,
- Java programming, as a tool for software implementation,
- patterns for software design, for improving software quality.

Course Description

Brief introduction to Java; software development process; functional specification and use cases; Unified Modeling Language diagrams; design methodology; OO design principles; implementation in Java; design patterns; Java applet framework; other Java topics (reflection, serialization), multithreading.

Blackboard:

All course material will be posted on Blackboard

<http://blackboard.fau.edu>

Assignments and Grading :

There will be a homework posted after the end of each chapter. Students will have to deliver a term project at the end of the semester.

Grading:

- Homeworks: 65%
- Project: 35%

The project's final report, the code, and the executable program are due on 7/29/2011.

Assignment Submission

Homeworks are due before the date specified on Blackboard and must be submitted on the Homeworks Blackboard page. No assignments will be accepted after the due date.

Policy for Incomplete Grade

According to University policies, students may receive an "Incomplete" grade only under exceptional circumstances. For this course, the instructor requires written documentation in support.

Policy for Plagiarism

Students are required to work alone on homeworks and the project, and they should submit their original work. Code copying is easy to identify. Any occurrences of plagiarism will be handled according to F.A.U. policies.

Useful References

- [Textbook webpage: http://www.horstmann.com/design_and_patterns.html](http://www.horstmann.com/design_and_patterns.html)
- [Textbook problem solutions: http://www.horstmann.com/oodp2/solutions/solutions.html](http://www.horstmann.com/oodp2/solutions/solutions.html)
- Mary Campione et al., "The Java Tutorial", Sun Microsystems, at <http://java.sun.com/docs/books/tutorial/index.html>
- Craig Larman, "Applying UML and Patterns", 3rd edition, Prentice Hall, 2004.
- Martin Fowler, "UML Distilled", 3rd edition, Addison-Wesley, 2003.
- Erich Gamma et al. "Design Patterns", Addison-Wesley Professional; 1st edition, 1995

Resources

- Java Development Kit (JDK) 6 : select JDK SE 6
<http://java.sun.com/javase/downloads/index.jsp>
- Java SE 6 Documentation: from <http://java.sun.com/javase/downloads/index.jsp>
- Java Tutorial: <http://java.sun.com/docs/books/tutorial/index.html>
- The BlueJ integrated Java environment:

- Violet UML Modeling tool: <http://sourceforge.net/projects/violet/>
- JUnit for unit testing: <http://junit.org/>

Install on your computer:

- Java Development Kit (JDK) 6 : select JDK SE 6 from <http://java.sun.com/javase/downloads/index.jsp>
- The BlueJ integrated Java environment: <http://bluej.org/>
- Violet UML Modeling tool: <http://sourceforge.net/projects/violet/>
- JUnit for unit testing: <http://junit.org/>

Note: students can use any other Java IDE and UML modeling tool they are familiar with.