

Dr. Jill Zimmerman
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Office Hours:

10:30 - 11:30 M
8:30 - 9:30 T
12:00 - 1:00 W
others by drop in or appointment

Text: Object-Oriented Design and Patterns 2nd Edition by Horstmann

Course web page <http://phoenix.goucher.edu/~jillz/cs205>

Course Description:

This course introduces object-oriented design and software design patterns. Advanced topics of object-oriented programming including interfaces, polymorphism, inheritance, generic types, multithreading, and user interface programming will be explored. You will master the programming process with moderately sized projects from specification through complete implementation.

Course Learning Outcomes:

After successful completion of this course you will be able to:

- L1: Design and implement classes from a project specification
- L2: Apply interfaces, abstract classes, and inheritance to achieve polymorphism
- L3: Apply common design patterns to programming problems
- L4: Write event driven, multithreaded programs

Course Resources

We will be using Java running on the Eclipse IDE. You will need to bring your laptop to class every day.

Course Mechanics:

I expect you to bring your textbook to class every day and be prepared to be an active learner. You will need to read the relevant chapters of the text ahead of working on the labs and projects. You will have a semester long project to create a moderately sized software artifact.

You will be working with partners throughout the course and this carries responsibilities. You need to be prepared for classwork, arrive on time, and perform your share of the work. If the unexpected should happen, and you must miss or be late to class, you must contact

me promptly concerning this absence. If you prove to be an unreliable partner, you may be required to work on your own and not benefit from group interactions.

Course Schedule:

Topics	Due Dates
Chapter 1 Java Review - Lab 0A	Aug 30
GUI Programming - Lab 0B	Sept 6
Chapter 2 Object Oriented Design - Lab 1	Sept 11
Project - part 1	Sept 18
Project - part 2	Sept 27
Chapter 4 Types and Polymorphism - Lab 2	Oct 4
Chapter 5 Patterns and GUI Programming - Lab 3	Oct 16
Project - part 3	Oct 23
Chapters 6, 7 Inheritance, Abstract Classes, Java Object Model - Lab4	Nov 1
Chapter 9 Multithreading - Lab 5	Nov 8
Project - part 4	Nov 22
Project - part 5	Dec 6

Grading:

The following table shows the grading percentages and how each assignment relates to the course learning objectives and their cognitive level:

Assignment	Foundation	L1(Create)	L2 (Apply)	L3(Apply)	L4 (Apply)	%
Lab0A	2.5%					2.5%
Lab0B	2.5%					2.5%
Lab1		5%				5%
Project1		10%				10%
Project2		10%				10%
Lab2			10%			10%
Lab3				10%		10%
Project3		5%		5%		10%
Lab4			5%	5%		10%
Lab5					10%	10%
Project4					10%	10%
Project5		10%				10%
Total %	5%	40%	15%	20%	20%	100%

Academic Dishonesty:

Turning in work that was produced by someone else is cheating and will be subject to an [Honor code](#) violation. I will give you a lot of opportunity to collaborate with your fellow students and ask me for assistance, but if you violate that trust and cheat by submitting work that is not yours and your partners' you will be hurting yourself and others in the following ways:

1. You would be failing to engage in the authentic learning and mastery of the academic material and thus harming your own education.
2. You would be reducing the enjoyment of accomplishments earned through genuine effort.
3. You would be creating an environment of broken trust, which then limits the ability of students to work together meaningfully and collaboratively.
4. You would be harming your reputation and face serious consequences.