Our Focus: Object-Oriented Analysis & Design.

- **Analysis**: develop conceptual models of the problem domain.
- **Design**.
  - Develop models of the software solution.
  - Develop programs that implement the design models.

Course Objectives

**Conceptual objectives.**

Learn to
- Think in terms of objects.
- Assign responsibilities to objects.
Specific Course Objectives

Learn to:
- Analyze problems & develop conceptual models.
- Generate designs from the models.
- Implement OO software.
- Evaluate & improve OO models & code.
- Use the Unified Modeling Language (UML).

Course Text

Applying UML and Patterns
An Introduction to Object-Oriented Analysis and Design

Other References

- E. Gamma, R. Helm, R. Johnson (Gang of Four). Design Patterns: Elements of Resusable Object-Oriented Software, 1995.
Grading

Approximate breakdown:
- Mid-semester Exam: 25% of grade
- Final Exam: 25% of grade
- Assignments: 50% of grade.
  All (or most) assignments done as pairs ---	teams of 2.

Planned Grading Curve

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
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<tbody>
<tr>
<td>A</td>
<td>90.0 - 100</td>
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<tr>
<td>A-</td>
<td>88.0 - 89.99</td>
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<tr>
<td>B+</td>
<td>86.0 - 87.99</td>
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<tr>
<td>B</td>
<td>80.0 - 85.99</td>
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<tr>
<td>B-</td>
<td>78.0 - 79.99</td>
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<tr>
<td>C+</td>
<td>76.0 - 77.99</td>
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<tr>
<td>C</td>
<td>68.0 - 75.99</td>
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<tr>
<td>D</td>
<td>58.0 - 67.99</td>
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<tr>
<td>F</td>
<td>0.0 - 57.99</td>
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</tbody>
</table>

The instructor may adjust scores to fit a curve.

Regrade Policy

- I will be glad to re-grade work.
  Contact me as soon as possible for a
  re-grade.
- Work will be re-graded in its entirety,
  and may result in an increase,
  decrease, or no change in the grade.
Assignments

- Will all focus on a semester project.
- Each assignment will be a portion of the project.
- Assignment deliverables:
  Requirements, use cases, conceptual models, design models, program code, test code.
- Pair development: 2 person teams.

Outline of Course Topics

1. Introduction to Object-Oriented Analysis & Design.
2. Problem Analysis.
4. System Behavior modeling.
5. Design modeling - Cycle 1.

Outline of Course Topics - 2

6. From design to code --- Cycle 1.
7. Java coding.
10. Design patterns and refactoring.