

**Ryerson University**  
**Electrical and Computer Engineering**  
**COE318 – Software Systems**  
**Fall 2008**

**Course Information**

[www.ee.ryerson.ca/~courses/coe318/](http://www.ee.ryerson.ca/~courses/coe318/)

All course related information, announcements and material such as lab documents are available at the course website [www.ee.ryerson.ca/~courses/coe318/](http://www.ee.ryerson.ca/~courses/coe318/). It is student's responsibility to check this website regularly.

### Introduction

This course introduces fundamental concepts of abstraction, modeling and program design. Emphasis is placed on software design. This course uses Java as its programming language and Netbeans as the development environment.

### Instructors

Name	Office	Email	Extension	Office hours
Prof. Ken Clowes	ENG 449	kclowes@ee.ryerson.ca	6099	TBA
Prof. Olivia Das (course coordinator)	ENG 464	odas@ee.ryerson.ca	6114	Fridays: 1:15pm – 2:15pm

### Course Objectives

- Design and use classes, objects, inheritance, super classes, sub classes, and polymorphism
- Students should be able to use object-oriented design to develop and implement computer-based solutions to problems.
- Students should be able to apply the steps necessary for software development with classes including using and extending existing classes as well as developing new classes to solve problems.
- Students should use and master the essential features of Java including control (sequential, selection, repetition, and exceptions), parameter passing, arrays, and strings.

## Course Evaluation

Theory	
Quiz	5%
Midterm examination	20%
Final examination	45%
Laboratory	
Lab assignments	30%

- **IMPORTANT:** Students must achieve passing grades in both the theoretical and the laboratory components of the course in order to pass the course.
- All the Labs have to be done individually.
- Lab assignments should be submitted 24 hours before the beginning of the next lab. Late lab assignments will not be accepted and will receive a mark of 0.
- Two week labs carry double weight than one week labs.

## Reference books

### *Primary textbook*

- (1) *Head First Java*, By Kathy Sierra and Bert Bates, Second Edition, February 2005, ISBN: 0-596-00920-8, 720 pages.
- (2) *Java Software Solutions (Foundation of Program Design)*, 4th Edition, June 2004. John Lewis & William Loftus, Addison Wesley. ISBN 0-321-24583-0, 910 pages.

### *Other references*

- (1) Sun's Java tutorial. <http://java.sun.com/docs/books/tutorial/java/>
- (2) Thinking in Java, 3rd edition. <http://tutorials.kisland.com/download/bruceeckel/>
- (3) *Object-Oriented System Development*, by Dennis de Champeaux, Douglas Lea, and Penelope Faure published by Addison Wesley.
- (4) *Objects first with Java, a practical introduction using BlueJ*, by David J. Barnes & Michael Kölling published by Prentice Hall / Pearson Education, 2004.

## Lab tools

Following tools will be used in the lab:

- Sun JDK 6 Update 7 and Netbeans 6.1 <http://java.sun.com/javase/downloads/index.jsp>

## Course Schedule

NOTE: This is a preliminary schedule and is subject to change and modifications.

In the table below, chapter numbers are from the “*Head First Java*” book.

Week		Topic	Chapter	Lab
1	Sept 2 -	Software Development Cycle. Object-Oriented Programming Paradigm.	<a href="http://java.sun.com/docs/books/tutorial/java/concepts/index.html">http://java.sun.com/docs/ books/tutorial/java/concep ts/index.html</a>	No labs in this week
2	Sept 8 -	Programming Languages. Classes and Objects.	Chap. 1 & Chap. 2	Lab1
3	Sept 15 -	Variables	Chap. 3	Lab2
4 (Quiz)	Sept 22 -	Using Classes and Objects	Chap. 4 and Chap. 10	Lab3
5	Sept 29 -	Writing Classes	Chap. 5	Lab4
6	Oct 6 -	Implementation of Classes	Chap. 6	Lab5
Oct 13 (Monday) - Thanksgiving (University closed)				
7 (Midterm)	Oct 13 -	Object-Oriented Design		Lab5 (contd.)
8	Oct 20 -	Object-Oriented Design (contd.) Testing technique using JUnit		Lab6
9	Oct 27 -	Inheritance	Chap. 7 & Chap. 9	Lab6 (contd.)
10	Nov 3 -	Polymorphism	Chap. 8	Lab7
11	Nov 10 -	Polymorphism (contd.)	Chap. 8	Lab7 (contd.)
12	Nov 17 -	Exception	Chap. 11	Lab8
13	Nov 24 -	Review		Lab8 (contd.)

NOTE: Friday, November 28, 2008 will be used for Fall 2008 classes and activities which are normally scheduled for Mondays.