

Ryerson University
Electrical and Computer Engineering
COE318 – Software Systems
Fall 2009

Course Information

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/. 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	TBA

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, <http://www.mindview.net/Books/TIJ/>
- (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 and Netbeans

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	Date Range	Topic	Chapter	Lab
1	Sept 7 - 11	Software Development Cycle. Object-Oriented Programming Paradigm.	http://java.sun.com/docs/books/tutorial/java/concepts/index.html	No labs in this week
2	Sept 14 - 18	Programming Languages. Classes and Objects.	Chap. 1 & Chap. 2	Lab1
3	Sept 21 - 25	Variables	Chap. 3	Lab2
4 (Quiz)	Sept 28 – Oct 2	Using Classes and Objects	Chap. 4 and Chap. 10	Lab3
5	Oct 5 - 9	Writing Classes	Chap. 5	Lab4
6	Oct 12 - 16	Implementation of Classes	Chap. 6	Lab5
Oct 12 (Monday) - Thanksgiving (University closed)				
7 (Midterm)	Oct 19 - 23	Object-Oriented Design		Lab5 (contd.)
8	Oct 26 - 30	Object-Oriented Design (contd.) Testing technique using JUnit		Lab6
9	Nov 2 - 6	Inheritance	Chap. 7 & Chap. 9	Lab6 (contd.)
10	Nov 9 - 13	Polymorphism	Chap. 8	Lab7
11	Nov 16 - 20	Polymorphism (contd.)	Chap. 8	Lab7 (contd.)
12	Nov 23 - 27	Exception	Chap. 11	Lab8
13	Nov 30 – Dec 4	Review		Lab8 (contd.)

IMPORTANT NOTES:

- Fall 2009 undergraduate classes will end on Friday, December 4. However Friday, December 4 will be used for Fall 2009 classes and activities normally scheduled for Mondays. As a result, the last meeting of Fall 2009 classes and activities normally scheduled for Fridays will be Friday, November 27, 2009.
- For academic policies, please refer to the weblink <http://www.ryerson.ca/teaching/policies/>

- Please refer to Policy #150-Fall2009 in <http://www.ryerson.ca/senate/policies/> for accommodation of student religious, aboriginal and spiritual observance
 - Requests for accommodation of specific religious or spiritual observance must be presented to the instructor no later than TWO weeks prior to the conflict in question (in the case of final examinations within TWO weeks of the release of the examination schedule). In extenuating circumstances this deadline may be extended. If the dates are not known well in advance because they are linked to other conditions, requests should be submitted as soon as possible in advance of the required observance.
 - Given that timely requests will prevent difficulties with arranging constructive accommodations, students are strongly encouraged to notify instructors of an observance accommodation issue within the first TWO weeks of classes. To facilitate timely requests and decision making, the University will take all practical steps to ensure that students and instructors are aware of the policy and related observance issues.