

CXEC320 - Java Advanced

Overview

This 42 hour non-credit course provides learners with the skills required to create Java applications using object-oriented programming principles and applying OO design methodologies. Topics include SWING components, the Java Graphics API, applets, exception handling, File IO, data structures, the Java Collection framework, and JDBC. Learners create stand-alone and multi-threaded applications, as well as client/server applications using TCP/IP sockets.

Textbook: Introduction to Java Programming: Comprehensive Version, 9th Edition, by Y. Daniel Liang, Pearson Education Inc. (Prentice Hall), 2013, ISBN-13: 978-0-13-293652-1

Prerequisites

It is strongly recommended that students complete CXCP211 (Java Introduction) or have equivalent Java programming experience prior to taking this course.

Instructor:

Name	Email	Room	Tel	Hours
ILIA NIKI	inika@ryerson.ca	VIC 405		18:30 – 21:30

Administrative Support

Janet Shusterman, BSc., MHSc., BEd., OCT, jshuster@ryerson.ca 416.979.5000 ext. 7907

Course Policies

The assignments/project should be submitted through the assignment link on Blackboard. The entire assignment should be zipped in a file named as:

Last Name_CXEC320_Assignment1, etc.

The Eclipse project for each assignment should be also named as:

LastName_CXEC320_Assignment1, etc. Each exercise should be included in a separate package named *exercise1*, etc.

Feel free to email me questions about course content, assignments, etc.
All e-mail messages will be replied to within 48 hours.

Please read the course outline about RYERSON ACADEMIC POLICIES.

ASSESSMENT PROCEDURES

1. **Lab Assignments:** There will be **6** lab assignments to be completed on bi-weekly bases.
2. **Exams:** There will be one **midterm** exam and one **final** exam.

EVALUATION AND GRADING SYSTEM:

Mid-Term Exam	25 %
Lab Assignments	50%
Final Exam (comprehensive)	25%

LATE ASSIGNMENTS:

All assignments are due at the beginning of class on the due date. There will be a deduction of 10% per class session for late assignments. Assignments more than two weeks late may not be accepted

The midterms will be opened-book exams and the content will cover all the material presented to that point in the class. The final exam will be an opened-book exam. The final exam content is based only on the topics covered in the classroom during the entire course. For more information about the assignments content, check the assignments folder on Blackboard.

Important dates

Work	Due Date (Week Number)	Marks
Lab Assignment 1	2	8
Lab Assignment 2	4	8
Lab Assignment 3	6	8
Mid-Term Test	7	25
Lab Assignment 4	8	8
Lab Assignment 5	10	8
Lab Assignment 6	13	10
Final Exam	14	25

Resources:

Note: You must be able to access material via Blackboard(Bb)

Blackboard folders:

Course Information Folder: Course Outline and Syllabus

Course Documents: PPT lecture slides and examples

Assignment Folder: Each Assignment with details, marks & due dates will be posted

Weekly Topics

Week	Date	Topics	Learning Objectives	Required Reading
1	Jan 15	Exploring Graphical User Interface Components	Learn GUI Components, Layout Managers	Chapter 12
2	Jan 22	Drawing Graphics, Shapes, and Images	Implement Graphics capabilities in Java applications.	Chapter 13
3	Jan 29	Handling Exceptions and Text I/O	Handle Exceptions in Java applications. Use File I/O capabilities of java.io package.	Chapter 14
4	Feb 5	Introducing Abstract Classes and Interfaces	Implement abstract classes and interfaces	Chapter 15
5	Feb 12	Working with Event-Driven Programming and GUI Components	Understand event listener model. Build event-driven GUI applications.	Chapter 16,17
6	Feb 19	Examining Applets, Multimedia, and Binary I/O	Implement Multimedia features in java applets and applications. Utilize Random Access Files.	Chapter 18,19
7	Feb 26	Mid-Term Exam		
8	March 5	Utilizing Generics, Java Collections	Understand generics and utilize Java	Chapter 21, Chapter 22

		Framework	collections.	
9	March 12	Analyzing Data Structures and Algorithms	Understand Maps and Sets. Analyse sorting algorithms.	23, 25
11	March 19	Developing Multithreading and Parallel Programming	Build Java applications with multithreading capabilities.	Chapter 32
12	March 26	Building Network-Based Applications	Implement client/server applications using TCP/IP or UDP/IP based sockets.	Chapter 33
12-13	April 2, 9	Implementing Database Applications with JDBC	Implement data access capabilities in Java applications.	Chapter 34
14	April 16	Final Exam		