Advanced Java Programming
Boston University

COURSE DESCRIPTION

Comprehensive coverage of object-oriented programming with cooperating classes. Implementation of polymorphism with inheritance and interfaces and in Java library containers. Programming with exceptions, stream input/output and graphical AWT and Swing components. Threads, sockets, datagrams and database connectivity are also covered in this course. Laboratory course.

PREREQUISITE

MET CS 342 or equivalent knowledge of Java. Or MET CS 521 and MET CS 526. Or instructor's consent.

TEXT
Required:
Java How to Program (10th Edition), by Deitel and Deitel, published by Pearson, 2015, ISBN-13: 978-0-13-380780-6 (ISBN-10: 0-13-380780-0)

GRADING

Programming assignments	35%
Project/Presentation	15%
Homework assignments	05%
Exam	45%

PROGRAM EVALUATION CRITERIA

Program correctness	50%
Documentation	20%
Readability	20%
Etc.	10%

"Play is our brain's favorite way of learning." -- Diane Ackerman, PHD, Poet

SCHEDULE (very tentative)

DATE	TOPIC	READING (TEXT CHAPTER)
01/24	Introduction, Before You Start	1 thru 7, page xxxix
01/31	Classes, Methods, Objects	8
02/07	Inheritance, Polymorphism, Exception Handling	9, 10, 11
02/14	GUI, Graphics	12, 13
02/21	No Class – Substitute Monday Schedule of classes	
02/28	Regular Expressions	14
03/07	No Class – Spring Recess	
03/14	Files and Streams, Object Serialization	15
03/21	Generic Collections, Lambdas and Streams	16, 17
03/28	Generic Classes and Methods, GUI 2	20, 22
04/04	Concurrency, Accessing Databases with JDBC	23, 24
04/11	JavaFX	25
04/18	Networking	28
04/25	Review	
05/02	Exam	

IMPORTANT NOTES

- Reading the relevant material in the textbook is essential for gaining a thorough understanding of the topics covered in the course.
- Not all of the material in each chapter will be covered during lecture/discussion, but the material should be read in any case.
- Your programs must be done in Java. One point will be deducted from the grade for each week a programming assignment is late after a one-week grace period.
- Be sure to get a copy of the "Spring 2017 Course Schedule". It contains lots of useful data such as radio stations announcing class cancellations, important dates, etc.; or go to http://www.bu.edu/met/

ACADEMIC HONESTY

The course is governed by the Academic Conduct Committee policies regarding plagiarism (any attempt to represent the work of another person as one's own). This includes copying (even with modifications) of a program or a segment of code. You can discuss general ideas with other people, but the work you submit must be your own. Collaboration is not permitted.

ELECTRONIC MAIL

To be sure you *can* communicate with the instructor electronically and to add your name to the class distribution list, please send a test message with the subject line *CS622 TEST* to the instructor's email address.