# Advanced Java Programming
# Boston University

**MET CS 565-W3, Fall 2014**
Day: Wednesdays, 6:00-9:00 PM
Location: Chelmsford
Instructor: Mike Hadavi
E-mail: hadavi@bu.edu
Office Hours: After class
Website: http://learn.bu.edu

## 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

Basic Java or MET CS 342 or equivalent knowledge of C++.

## 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) |
|---|---|---|
| 09/03 | Introduction, Before You Start | 1 thru 7, page xxxix |
| 09/10 | Classes, Methods, Objects | 8 |
| 09/17 | Inheritance, Polymorphism, Exception Handling | 9, 10, 11 |
| 09/24 | GUI, Graphics | 12, 13 |

| | | |
|---|---|---|
| 10/01 | Regular Expressions | 14 |
| 10/08 | Files and Streams, Object Serialization | 15 |
| 10/15 | Generics Collections | 16 |
| 10/22 | Lambdas and Streams | 17 |
| 10/29 | Generic Classes and Methods, GUI 2 | 20, 22 |
| 11/05 | Concurrency | 23 |
| 11/12 | Accessing Databases with JDBC | 24 |
| 11/19 | JavaFX | 25 |
| 11/26 | No Class – Thanksgiving Recess | |
| 12/03 | Networking | 28 |
| 12/10 | Review | |
| 12/17 | 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 "Fall 2014 Course Schedule". It contains lots of useful data such as radio stations announcing class cancellations, important dates, etc.

**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 *CS565 TEST* to the instructor's email address.

**HOW TO APPLY FOR A BU ACS ACCOUNT**

You need an ACS account to access the course's website. If you do not have an ACS account, you can apply for one by following the directions at this site:
http://www.bu.edu/computing/accounts/acsaccounts/