CSIS 10A Programming Methods I: Java

Fall 2013

Time: Tue/Thur 10:00 am - 12:30 pm   **Room:** BMC 207   **Section:** 4147 **Units:** 4.0

Instructor: Tom Rebold   **Office:** BMC-202B   **Contact:** trebold (a) mpc (.) edu 645-1327

Office Hours: M2-3, T 3-4, W12-1, W5-6, F12-1

Class website: http://tomrebold.com/csis10a   **Turn in your work:** here
Get feedback: here

Text: Downey, Think Java: How to Think Like a Computer Scientist (free online), 5.1.2, 2012, Green Tea Press

Recommended: Gaddis, Starting out with Java: from Control Structures to Objects, 4th edition, 2009 (an earlier edition is also acceptable).

Materials:

- Storage media (USB thumb drive) for shuttling programs between home and lab
- A personal computer with BlueJ and Java installed on it

Tutoring: Steve Bruemmer, our Instructional Tech, is available in BMC205/207 M-Th 9-5, F9-2

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Course description:

The overall goal of this course is for you to learn the basics of designing algorithms and programming computers in an object-oriented language. You will express your algorithms using the basic features of the Java programming language and develop strategies for constructing clear, understandable, and efficient code. You should already have some exposure to the elements of programming from a class like CSIS 1 or your own self study. These topics will be developed further in CSIS10B.

Course Advisories: Eligibility for ENGL111/112, MATH263, CSIS1

Student Learning Outcome: Students will be able to

- Take a problem statement and write a computer program that solves the problem

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Objectives: Students will be able to

1. Analyze a problem statement and design a solution for the problem.
2. Construct Java computer code to implement the solution of the problem.
3. Debug and test the coded solution for syntax, logic and runtime errors.
4. Comprehend the factors involved with structured and object-oriented programming.

Pair Programming: All labs will be done with a partner. See video for more info.

Accommodations: If you need accommodations or have a disability, please talk with me for arrangements.

Calendar:

	Lecture	Video	Reading	Assess	Labs	Homework Due the following Tuesday
8/27 8/29	Intro Variables and Types	video video	Chapter 1 Chapter 2	1	Lab1 download	Assignment 1 download soln
9/3 9/5	Void Methods	video video	Chapter 3	2	Lab2 download	Assignment 2 download soln
9/10 9/12	Conditionals & Recursion	video video	Chapter 4	3	Lab3 download	Assignment 3 download soln
9/17 9/19	GridWorld Part 1 Review	video video	Chapter 5	4	Lab4 download	Assignment 4 download soln
9/24 9/26	Test 1, Value Methods	video	Chapter 6	5	Lab5 download	Assignment 5 download soln
10/1 10/3	Iteration and Loops Midterm Project	video video	Chapter 7	6	Lab6 download	Assignment 6 download soln
10/8 10/10	Strings and things Input/Output	video video	Chapter 8 App B	7	Lab7 download	Assignment 7 download soln
10/15 10/17	Mutable Objects/ 2D Graphics	video video	Chapter 9 App A	8	Lab8A download	Assignment 8A download soln
10/22 10/24	GridWorld Part 2	video video	Chapter 10	9	Lab8B download	Assignment 8B download soln
10/29 10/31	Review Test 2	video video			Final Project Ideas	Applet Examples

11/5 11/7	Create Your Own Objects	video	Chapter 11	10	Lab9 download	Assignment 9 download soln
11/12 11/14	Arrays	video video	Chapter 12	11	Lab14 download	Assignment 14 download soln
11/19 11/21	Arrays of Objects Objects of Arrays	video video	Chapter 13 Chapter 14	12	Lab10 download	Assignment 10 download
11/26 11/28	OOP HOLIDAY-- THANKS	video video	Chapter 15	13	Lab11 download	Assignment 11 download
12/3 12/5	GridWorld Part 3	video video	Chapter 16	14	Lab12 download	Assignment 12 download
12/10 12/12	Work on project Review, Presentations	video video				
12/17	(Tue) Final Exam 10:30 AM - 1 PM					

Resources:

- CSIS10A Guest Book
- Turn in your work here
- Receive feedback on your work here
- How to Install BlueJ
- Final Project Examples
- Code Animations
- Bouncing ball

Attendance:

If you decide to drop, to avoid getting an F, please remember to remove yourself from the class using webreg. I often drop people who haven't participated in over a week, but please don't count on that!

Class Work:

Online Assessment Exercises	5%
"Pair Programming" labs	10%
Weekly assignments	5%
2 Tests @ 20% each	40%
Midterm Project	5%
Final Project	10%
Final Exam	25%

Grades will be based on the following curve:
  A - 90%
  B - 80%
  C - 65%
  D - 50%

Homework Grading:

Each week there will be a number of textbook based and programming activities for you to solve outside of class. When you are finished, make a jar of your assignment folder, then upload it to the class website and print a copy to hand in. Your assignment grades will be based on the following rubric:

Assignment Success Score
  (0 to 10 pts.) Proportion of problems solved
  (plus 1 pt for extra work)

Deductions
  (1/2 pt.) Lack of meaningful names used in declarations
  (1/2 pt.) Lack of informative comments
  (1/2 pt.) Poor or inconsistent formatting
  (1/2 pt.) Poor choice of Java commands
  (1/2 pt.) Improperly constructed .jar file

No points can be given for late assigments.

Important Note on Academic Honesty:

You are required to work on labs with a partner. However, assignments are to be completed by yourself alone. Please do not ask for or hand your homework off to other students in class. If you do, please be aware that both you and the other student will experience the same consequences.

The standard policy is to give a grade of F for both participants and if deemed necessary make a visit to the Dean of Students with the cheaters. We have had very serious cases in which the students were dropped from the course and suspended from taking courses at MPC. This goes on your record and of course is not viewed favorably by other schools and employers who want and need to trust you.