

**Course ID/Name:** Comp 425 Introduction to Programming – Java

(rev 8/30/16)

**Semester:** Fall 2016

**Instructor:** Michael Jonas (**office:** room P141. **email:** mcy59@unh.edu)

**Time and Location:** Tuesday, 5:30 – 8:30pm, Room 132 in Pandora

**Office Hours:** Tuesday, 8:30pm or by appointment

**Web Presence:**

Website: <http://pubpages.unh.edu/~mcy59/comp/425>

Twitter: unhm\_prof\_jonas

**Course Description:**

An introduction to problem solving and object-oriented programming. Emphasis is on programming concepts and techniques and their application to software development. Students learn to write, review, document, share, and demonstrate interactive applications and participate in pair programming, peer-led tutoring, and collaborative learning throughout the course. 4 cr.

**Learning Objectives:**

Upon completion of this course, students should be able to:

- Apply object-oriented programming concepts and techniques
- Create and experiment with interactive applications
- Write, review, document, share, and demonstrate programming applications
- Communicate timely and work in teams effectively
- Argue for the use of open source software tools and adoption of open source collaboration practices

**Textbook:**

Primary: *Introduction to Programming with Greenfoot*, Michael Kolling, Prentice Hall, 1st ed 2010 (ISBN-10: 0-13-603753-4)

**Software Tools:**

- Java 6. Go to Java SE (Standard Edition) Development Kit (JDK) 6 Update 21 Download.
- Greenfoot software from <http://www.greenfoot.org/download>.

**Student Work and Class Pedagogies:**

Class will be divided into two parts, a lecture followed by a lab (with a break in between). Lectures will generally take the form of a board presentation with questions and answers, although at times we may break up into groups to take on a case study of an active topic.












### Lab Work:

Labs will take on a more collaborative format where students can team up to solve problems. Some labs will be guided by the instructor whereas others, students will be given an assignment to solve in pairs or groups. Most of the lab work will also translate to further homework assignments where student can show individually what they have learned within the collaborative setting of the lab.

### Assignments:

A total of 5 assignments are given during the semester. Each assignment will build on the previous set of assignments and become progressively harder. All assignments are expected to be done individually unless otherwise stated.

### **Schedule:**

<i><b>Class Date</b></i>	<i><b>Class Topics</b></i>	<i><b>Readings</b></i>	<i><b>Progress</b></i>	<i><b>Assigned Lab</b></i>	<i><b>Assignments Due</b></i>
Aug 30	Course Overview, Tools, and Basics				
Sep 6	Fundamentals of Programming	chapter 1		Lab1	
Sep 13	Object behaviors and attributes	appendix D			Hw1
Sep 20	Writing a Java program with Greenfoot	chapter 2, appendix A		Lab2	
Sep 27	Object interactions	chapter 3			Hw2
Oct 4	Object animation	chapter 4		Lab3	
Oct 11	Method call analysis	appendix B			Hw3
Oct 18	Review				
Oct 25	<b>Exam 1 (1 hour)</b>				
Nov 1	Code reading and analysis	chapter 5		Lab4	
Nov 8	Arrays and for loops	chapter 6		Lab5	
Nov 15	<u>Class lab:</u> transition Hw4 into project work	chapter 7			Hw4
Nov 22	<u>Class lab:</u> project add-ons				
Nov 29	Review	appendix C		Lab6	
Dec 6	<b>Exam 2 (1 hour) &amp;</b> <u>Class lab:</u> work on project				Project: design
Dec 13	Battle Royal				
					Project: final (due Dec 20 <sup>th</sup> )

## **Grading**

### 15% Participation

This includes attendance and participation

### 20% Lab work

Lab assignments done during lab: 5 out of 6 at 4 points each

### 20% Homework

You will have 4 homework assignments at 5 points each

### 15% Programming Project

Design worth 5 points and implementation worth 10 points

### 30% Exams

You will have 2 exams worth 15 points each

## **Policies:**

### Academic Honesty and Collaboration:

Collaboration is encouraged and supported in the classroom through lab activities and discussion, and outside the classroom via emails and direct interaction. However, the homework assignments and tests you submit **must be entirely your own work.**

See the University policy on **Academic Honesty** for more information.

### Attendance:

Is mandatory and you will lose on class participation grade if you miss class without an excuse.

### Late Assignments and Make-Up Exams:

Policies for late assignments and make-up exams are very strict and apply only in exceptional cases of student illness, accident, or emergencies that are properly documented. It is your responsibility to make arrangements with instructor before the deadline as soon as you are aware you will miss a deadline, exam or class. Unexcused late assignments are penalized 20% per day.

### Use of Electronic Devices in Classroom:

Not allowed during examinations. Absolutely no cell phone use during class time.