CS 163: Java (CS1) No prior programming experience

http://www.cs.colostate.edu/~cs163/
canvas.colostate.edu

Introduction to CS1 Java Programming

Instructor

Russ Wakefield
Section 001, MWF 2:00 - 2:50 pm, Yates 104
  ▪ Sections 002, 302, MWF 12:00 - 12:50 pm, Chem 101

Office: CSB 240
Email: Russ.Wakefield!@colostate.edu
Office hours are posted on syllabus.
Teaching assistants on syllabus.

Why Computer Science?

- It’s exciting
- It’s lucrative
- It’s fun (sometimes!)

Curriculum

- C1: Languages, Computers, Operating Systems
- C2: Identifiers, Variables, Expressions, Operators
- C3: Conditionals, Booleans, Logical Operators
- C4: Math Functions, Characters, Strings
- C5: Loops: while, do/while, for
- C6: Methods: Parameters, Return Values
- C7, C8: Single and Multidimensional Arrays
- C9: Objects and Classes
- C12: Exceptions and File Input/Output
- C13: Interfaces
- C18: Recursion
- C20: Lists, Collections, Iterators
- C22, C23: Algorithms, Complexity, Sorting

Java Programming
Resources: Java Textbook

Introduction to Java Programming – Daniel Liang, 10th or 11th Edition

Resources: zyBooks

- Setup instructions on syllabus
- Activities are graded!
- Required by Lab this week!

Resources: CodingBat

- Setup instructions on syllabus
- Activities are graded!

Resources: iClickers

- Register your clicker on Canvas by August 20
- Bring your clicker to every lecture!

Grading Criteria

- Your grade will be based on:
  - Exams: 60%
    - 1st midterm: 15%
    - 2nd midterm: 15%
    - 3rd midterm: 15%
    - Final exam: 15%
  - Programming Assignments / Quizzes: 20%
  - Iclicker Quizzes: 5%
  - Labs / zyBooks / codingbat: 15%

Grading Criteria

- Grades will not be assigned lower than shown:
  - >= 90% A
  - >= 80% B
  - >= 70% C
  - >= 60% D
  - Else F

- You must have a minimum average of 60% on the exams to receive a C

The instructor reserves the right to assign plus and minus grades. However, an A- (a minus), for example, is a lower grade than an A and therefore cannot be assigned to a score >= 90%. The instructor may choose to lower the cutoffs (i.e., be more generous) at his sole discretion at the end of the semester.
Grading Policy
- If you think you have been graded unfairly on a programming assignment, visit the cs163 help desk for an explanation (feedback is in the checkin lab).
- All lab grading issues should be resolved in lab with the lead Lab TA.
- If you cannot resolve the problem, email the instructor.
- All grades and exams are returned within one week of the due date (usually even faster).
- Complaints about grades must be made within two weeks of when the grade is released.

Communications
- Talk with your teaching assistant before or after labs, at help desk, or during lab hours.
- Talk with your instructor during office hours.
- Email your instructor directly only if privacy is needed (health issue, staff complaint, etc.)
- Do not attach comments to Canvas, use the Piazza bulletin board instead.
  - Piazza is in Canvas modules.
  - Topics for assignments, Labs, ...

Late Policy
- Every assignment lists a due date
  - Almost always on Mondays at 6pm
  - Full credit requires meeting this deadline
- Every assignment lists a late date
  - Late submissions have 20% penalty
  - After this deadline, no credit is given
- Exceptions only for excused absences
  - Medical emergencies, family emergencies, with documentation
  - If an emergency happens, email your instructor right away
- Do not miss in-class quizzes!
  - Very hard to get right without group help

Getting Help
- Web Sites:
  - www.cs.colostate.edu/~cs163
- Lectures, Recitations, Lab Hours, Help Desk
- Lab operators (general questions)
- Office Hours (see syllabus)
- Tutors, Friends, Consultants (be careful)
- Textbook, Internet

Academic Integrity
- All assignments, labs, quizzes, exams are solo
  - Unless otherwise specified
  - No notes, books, internet, other people
  - You may get help from course instructors and TAs
  - You may discuss concepts with other students, but:
    - Never share code with another student
    - Never copy code from another student
    - Never let anyone else type in code for you
- Know the department academic honesty code!

Lecture Expectations
- Come to class
  - Attendance predicts success
- Be active, not passive:
  - Take notes, Ask questions
- Be prepared
  - Do reading assignments before the lecture
- Be on time
  - Lectures start and end on time
Lecture Expectations

- Cell phones off or on vibrate-only
  - If you need to answer, leave the room first
- Laptops for note taking or coding!
  - No games, audio, video, inappropriate websites
- Respect your colleagues
  - No snide or rude comments
  - No comments on abilities
  - No extended conversations

Lab Expectations

- Use the Linux Lab – COMSC 120
  - Not the Windows Lab – COMSC 110
- Lab operator on duty during day
  - You can ask then general questions
- Treat the lab as a professional workplace
  - No disparaging comments
  - No loud/rude/distracting behavior
  - Professional comportment at all time
  - No sexual harassment of any sort, not ever!

Tell Someone!

- If you see something concerning, please Tell Someone
  - Your Instructor
  - Your TA
  - CSU Tell Someone Office
    - http://supportandsafety.colostate.edu/tellsomeone

Motivation

A student asks a roommate, “Could you please go shopping for us and buy one carton of milk and, if they have avocados, get six.” A short time later, the roommate returns with six cartons of milk. “Why did you buy six cartons of milk?” asks the student. The reply: “They had avocados.”

Reader’s Digest, September 2013

This is exactly what your Java program will do, because computers do what you ask them to do, not what you want them to do!
Motivation

### Average U.S. Tech Salary 5-Year Trend

<table>
<thead>
<tr>
<th>Year</th>
<th>Tech Salary</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>$81,327</td>
<td>2.4%</td>
</tr>
<tr>
<td>2012</td>
<td>$84,610</td>
<td>-5.3%</td>
</tr>
<tr>
<td>2013</td>
<td>$87,011</td>
<td>2.6%</td>
</tr>
<tr>
<td>2014</td>
<td>$89,450</td>
<td>7.7%</td>
</tr>
<tr>
<td>2015</td>
<td>$96,373</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Source: Dice Tech-Salary Survey