COMP 110
Introduction to Programming

Fall 2015
Time: TR 9:30 – 10:45
Room: AR 121 (Hanes Art Center)

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Introduction
Jay Aikat
Research Assistant Professor, Computer Science, UNC Chapel Hill

My Journey into Teaching COMP 110...
Introduction

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Research Assistant Professor, Computer Science, UNC Chapel Hill

Professional work and research in Computer Science

My Journey into Teaching COMP 110...

Registering for this Class

• 296 students in this class (capacity of this classroom)

• ConnectCarolina says “closed”

• You want to get in? (based on dropping those who don’t show up today and Thu)

• Sign up on one of the sheets being sent around right now!
Course info

• Course web page
  https://jayaikat.web.unc.edu/teaching/comp110/

• Syllabus
  http://cs.unc.edu/~aikat/courses/comp110/syllabus.pdf

Teaching Assistants (TAs)

• Hold LOTS of office hours – all in one location TBA (evenings too)
• Run hands-on lab sessions in FB 007 (Brooks)
• Grade quizzes, assignments and exams
• Help you understand the material
  Do not help you do the assignments
About you...

• By Class
  – freshman - 12%
  – sophomore - 42%
  – junior - 27%
  – senior - 19%

• By Major
  – Psychology - 23%
  – Biology - 12%
  – Math - 10%
  – Comp Sci - 9%
  – Business - 8%
  – Economics - 8%
  – Chemistry - 7%
  – Journalism - 3%
  – Exercise and SS - 3%
  – undecided - 16%

Your majors

• Psychology
• Biology
• Computer Science
• Economics
• Business Administration
• Chemistry
• Mathematical Decision Sciences
• Exercise and Sports Science
• Political Science
• Physics
• Applied Science
• Information Science
• Global Studies
• Journalism
• Communication Studies
• Philosophy
• Mathematics
• Sociology
• Anthropology
• Environmental Science
• non-degree grad
• Undecided
Let’s take a detour…

COMPUTER SCIENCE: Making a Difference

About COMP 110

• Learn how to develop *algorithmic thinking and problem solving skills*

• Learn the basic components of computer programming
  • can be applied to any programming language (Java, C++, etc.)

• Is COMP 110 right for you?

• Requirements / prerequisites
  • no programming knowledge assumed
Is COMP 110 right for you?

• Have you taken a programming course before? (e.g. High School AP CS)

• COMP 116: Intro to Scientific Programming (MATLAB)

• Three sections of COMP 110 this semester!

Sending Email

• To me or TAs:
  • aikat@cs.unc.edu
  • comp110-team-cs@cs.unc.edu

• Put COMP 110 in subject line

• For example:
  [COMP 110] I’m lost
  [COMP 110] This course is too easy!
Course Objectives

• You will learn the basics of JAVA programming
• More importantly, **algorithmic thinking**
  – Algorithm: sequence of instructions used to solve a problem
    • *Programming is understanding.* (Kristen Nygaard)
    • Programming is abstraction.
    • You will learn how to describe a problem and its solution abstractly and precisely.
  – Can be applied to any programming language (Java, C++, Python, Matlab, etc.)

Basics

The details look different in different languages, but a few basic **instructions** appear in just about every language:

• **Input**: Gather data from the keyboard, a file, or some other device.
• **Output**: Display data on the screen or send data to a file or other device.
• **Arithmetic**: Perform basic arithmetical operations like addition and multiplication.
• **Conditional Execution**: Check for certain conditions and execute the appropriate sequence of statements.
• **Repetition**: Perform some action repeatedly, usually with some variation.
Textbook / Reference


Grading

- Programming assignments 45%
- Labs 10%
- Weekly Quizzes 5%
- Midterm 15%
- Final 20%
- Class participation / Attendance 5%
- Extra credit (TBD) upto 2%
Grading Scale

• A: 93 - 100; A- : 90 - 92.99;
• B+: 87 - 89.99; B: 83 - 86.99; B- : 80 - 82.99;
• C+: 77 - 79.99; C: 73 - 76.99; C- : 70 - 72.99;
• D+: 65 - 69.99; D: 60 - 65.99;
• F: 0 - 59.99.

Software

• Java and Eclipse
  -- See the course website for detailed installation instructions
Assignments

• Programming assignments
  – Programming assignments
    • Usually a week's time; highly time consuming

• Reading assignments
  – Complete reading assignments before class

• See class website for announcements and assignments

Collaborating on programming

Don't cheat!
You can
• talk to each other about the lecture topics
• talk about assignment requirements

You should
• do your own assignments -- design and code

You should never
• talk to each other about assignment solutions
• share code -- it is easy to detect and we will take action
Assignment and Lab Submissions

• Submit assignments through Sakai
• Naming code scheme
  – name your jar files for submission as follows:
    • youronyen_assignment#.zip
    • Example: aikat_assignment1.zip
• We will include these instructions with each assignment

Assignments and Labs

Late assignments are not accepted for full credit (see late policy)

No excuses acceptable:*  
“I started late”
“something came up“
“I had a very busy week”
Or any other creative excuses...

*Exceptions will be made as necessary
Due Dates

- Assignments and Labs are always due at 11:55 PM on the due date.
- Assignment or Lab is late if submitted after midnight on the due date.
- Example
  - Due date: Sep 10; say, your deserved credit: 90
    - If received on 11:55 PM, Sep 10: You get 90 points;
    - If received on 00:01 AM, Sep 12: You get 0 points!

Late Policy

- An assignment is on time only if it is received at or before 11:55 PM on the due date.
  - You will receive at most half the credit if the assignment/lab is received no more than 24 hours late.
  - After 24 hours, you will receive no credit.
- Example
  - Due date: Sep 10; Your deserved credit: 90.
    - If received on 11:55 PM, Sep 10: You get 90 points;
    - If received on 00:01 AM, Sep 11: You get 45 points;
    - If received on 00:01 AM, Sep 12: You get 0 points!
Exams

- Mid-Term
  - You can take a make-up mid-term ONLY in case of emergencies. I will ask for supporting documents (doctor’s note etc.)
- Final (*Tuesday Dec 8, 8:00 AM*)
  - To take the exam at a different time, you must get permission from your Dean and bring me the blue slip you get from the Dean.
- I do not give *incompletes*

Studying for Quizzes

- Go through the class slides and your notes
- Step through example code and make sure you understand
- Read the related sections in the textbook
Working on Assignments

• Before you open Eclipse and start coding:
  – read the assignment
  – think about what the assignment is asking for
  – review lectures and examples on the topic
  – write (on paper) your plan for completing the assignment (i.e., your algorithm)

Save and Make Back-ups

• Save a file as you edit it
  – Save it as and when you finish a part of it
  – However, if it’s working and you want to add some new function, you should make a copy of the working version

• Back up your work using USB drives, or Dropbox
  – https://www.dropbox.com/
Need Help?

- Piazza – stay tuned for announcement on email
- TA Office hours
- For help on general computer problems, or for free software
  - [http://help.unc.edu](http://help.unc.edu)
  - 919-962-HELP

Assignment 1

- Will be announced Thu, Aug 20
- DUE: Friday, Aug 28
- See the course website for assignments – [calendar tab](#)
START EARLY!

- Nope! This strategy will not work for this class! 😊

Our First Program

```java
public class HelloWorld {
    public static void main(String[] args) {
        System.out.println("Hello World");
    }
}
```
Next class

- Computer Basics
- Introduction to Programming
- Quizzes start Thu, Aug 27

→ Reading Assignment: Chapter 1