

# Your First Computer Science Class

## Description

If you are an Engineering Major at Virginia Tech you will learn the basics of computer programming. Your second semester Engineering Education class (Enge 1114) will cover programming in Matlab for the last third of the semester. When I was in Enge 1114 the majority of students did not like programming and they struggled with it. Engineers can also take CS 1044 as an elective, CS 1044 covers the programming language C++ and will teach you much more about programming. I'm here to tell you that programming can be fun, it may not always be easy, but it is a powerful addition to any engineer's toolbox.

You need to realize the computer is dumb it will only carry out the instructions that the programmer feeds into it. There is an old programming joke that details how you must think as a programmer. *"A woman asks her husband, a programmer, to go shopping: Dear, please, go to the nearby grocery store to buy some bread. Also, if they have eggs, buy 6. O.K., hun. Twenty minutes later the husband comes back bringing 6 loaves of bread. His wife is flabbergasted: Dear, why on earth did you buy 6 loaves of bread? They had eggs."* Programming is very literal, the computer will always do exactly what you tell it to do. The computer complies code written in a specific syntax that is unique to that programming language. The nice thing about programming is that when you learn how logically think through how to code a program then you can write the program in any programming language as long as you know the syntax. You do not have to have all the syntax memorized, programmers are constantly referring back to books and API references.

Learning programming is hard to some people, you should take time before your classes begin and read online tutorials or even some books. A good website to learn the basics of programming is <http://docs.oracle.com/javase/tutorial/java/index.html>. A good book to start with is Bruce Eckel's Thinking in Java. These two documents will get any incoming student a solid base in programming as long as they put the effort in.

## Glossary

**CS Lounge** - A room located in 106 McBryde. TAs for your class will hold office hours here and assist you with projects or questions. You will have to swipe your Hokie Passport to enter so do not forget it.

**Hokie SPA** - An online hub where a student can manage financial and academic information.

**Moodle** - A website used by many in the Computer Science department to replace Scholar. Moodle is the place to go when you need to get quick help because of the help forum many professors set up for their classes.

**Time table of classes** - A webpage that will display the time a class meets and the class code you can use to sign up for the class with on Hokie SPA.

**Web-CAT** - Projects and labs are submitted to Web-CAT either online or in your development environment. Web-CAT will run your code and compare your output with expected output, it's very important you follow your professor's instructions when naming things in your program because your grade will be extremely low if you don't due to the web-CAT not being able to compare your output.

## Steps

1. Sign up for the CS course(s) that interest you by going to Hokie SPA and using the Timetable of Classes link. You should try to sign up early so that you have a better chance of getting the class you want. Signing up may take awhile as some class times will conflict with each other and you will to readjust your schedule as you go.

---

### VT Alerts

Virginia Tech's notification system, comprised of a variety of methods by which the university can contact students, faculty, and staff.

### Hokie PLUS

View and update your address(es) and phone number(s), View e-mail address(es). View and update emergency contact information. View name change & social security number change information. Change your password.

### Hokie Spa

Register, View your Academic and Financial Aid records.

### Timetable of Classes

### Undergraduate Admissions

Apply for Undergraduate Admission. ([Opens in new browser to external Web Site](#))

### Graduate Admissions

File an application for admissions; Review existing applications, their status, and the status of supporting requirements. ([Opens in new browser](#))

### University Account Information

•View and Pay e-Bill •Add an Authorized Payer •Enroll or Adjust Direct Deposit Information •Enroll in the Budget Tuition Plan  
•Enroll in the Graduate Student Payroll Deduction of Comprehensive Fees Program •View HOLDS •View 1098-T

### Faculty Online Credential System

---

2. Try to prepare over the summer by reading a programming book or online tutorial. Reading a Java or C++ book, depending on the class you take, will put you ahead of most people in the class.

3. Go to class and pay attention. The early concepts you learn are the building blocks for everything else in programming. If you fall behind early it will be extremely hard for you to catch up and understand new material.

4. Get help with projects early. The CS professors at VT have taken surveys asking when students started their project and compared that to the grade they received, there is clear correlation between starting the project early and earning a better grade. If you're struggling with a project do not put it off, go to the TAs in the CS Lounge. Be sure to at least make an attempt at the project before you go to the CS Lounge though, they are not there to do your project for you. Remember your projects are submitted to Web-CAT and the queue on due dates to submit your project can be over 5 minutes, don't miss a deadline by waiting to submit late.

Web-CAT  
Automatic grading  
using student-written tests

Your Assignment Submission Results

Viewing: Fall 2013 » CS 2114 (Thur 10:10 McB 110) » Project 3 Phase 2: Restaurant Guide: GUI

Result Summary

Full Printable Report

Assignment	CS 2114 (Thur 10:10 McB 110): Project 3 Phase 2 try #20	Score Summary	
Name	Kyle Hiens Bentley (tkyle)	Design/Readability:	48.0/50.0
Partners	Kyle Hiens Bentley (tkyle)	Style/Coding:	15.0/15.0
Submitted	11/25/13 09:18PM, 6 days, 2 hrs, 40 mins early	Correctness/Testing:	35.0/35.0
Total Score	98.0/100.0	Final score:	98.0/100.0

Position in class:

5. Use the moodle forum to get help with your projects. Many professors will open up a help forum for their class. This forum is frequented by the professor and TAs, usually your questions will get answered within a day.

Welcome to the Computer Science Department's Moodle server.

New students should login using their Virginia Tech PID and password. Only VT PID accounts may login.

After login, you can click on a course in the center list to visit its homepage--the first time, be sure to enroll yourself in that course as well.

Common resources for all courses:

- Installing/updating BlueJ
- Web-CAT feedback forum
- Installing Eclipse

## COURSES

▼ Spring 2014

- MaSc 1044 Comp Sci: Liberal Arts Approach
- CS 1044 Intro to Programming in C++ Sp14
- CS 1054 Intro to Programming in Java
- CS 1064 Intro to Programming in Python Sp14
- CS 1114 Intro to Software Design
- CS 1124 Intro to Media Computation
- CS 1604 Intro to the Internet
- CS 2104 Intro Problem Solving (Ellis)
- CS 2104 Intro to Problem Solving in CS (Onufriev)
- CS 2114: Software Design & Data Structures

6. Be prepared for paper exams. Coding on paper without any help is a lot more difficult than programming from the comfort of your home. Try to find old exams or ask the professor if there are old exams to use as a study guide.