How to Survive the First Year of Computer Science

Technical Description

The first year in a new major can be overwhelming and possibly confusing. This article provides basic information about the typical first year as a potential computer science major. As the Computer Science Department is part of the College of Engineering, you cannot officially be a computer science major until you complete the College of Engineering's requirements for declaring. Depending on the amount of AP, IB, or transfer credit you came in with you may be able to declare as early as the end of your first fall semester, however most students declare at the end of spring semester.

Potential computer science majors generally take either CS 1114 or CS 2114 as their first CS course. The CS checksheet mentions that you may take CS 1124 instead of CS 1114, however, this is not recommended as CS 1124 is taught in Python and there is a very steep learning curve for these students when they go on to CS 2114. These two classes teach students major Java programming concepts. The concepts learned in these classes are expanded upon specifically in CS 3114 and used throughout other courses. If you come in with AP, IB, or transfer credit see an advisor from the Computer Science Department to determine which classes you should take.

CS 1114 introduces the basics of Java programming. It uses a graphical presentation to demonstrate how Java classes work together and relate. The premise of most of the projects involves a kangaroo like creature called a Jeroo. Your programs tell the Jeroo what to do and you can see these actions carried out by the Jeroo. This class introduces Sofia which is a "layer" that exists between the code you write and Android. Sofia makes it easier to perform various graphical procedures, such as calculating intersections of objects. Sofia will be used more in CS 2114. The class involves written homework assignments, programming projects, and programming labs. Depending on the professor there may be periodic quizzes and definitely two or more tests.

CS 2114 introduces Android programming. Sofia is once again used as an intermediate between Android. Major actions such as touches and collisions, for example are wrapped in Sofia to make them less complicated. This class focuses on utilizing various common data structures to write efficient code. Like CS 1114, this class has a mix of assignments. The labs are not individual, but focus on partner programming. The final project for this class is also more involved than CS 1114 in that it is a group project in which you will develop a fully functioning Android app.

While there is a lot of material to cover in the first year in computer science, it is definitely manageable. If you can make it through this first year you will have developed a strong foundation that will carry you through the rest of your college years and beyond.

Glossary

Association for Computing Machinery (ACM): The international society for computing and is available to both professionals and students. There is a local chapter of ACM at Virginia Tech. See their website for more details, (http://www.acm.vt.edu/).
Checksheet: A list of all of the classes you must take to graduate with a degree in CS. They are written for the average case student, if you came in with more credit or transfer from a different major see an advisor for advice on how to proceed. Select the checksheet that matches your graduation date from the list on the CS website, (http://www.cs.vt.edu/undergraduate/checksheets).
CS Lounge: Located in 106 McBryde the CS Lounge, otherwise known as the Undergraduate Learning Center, is the room where office hours for all CS classes are held by TAs. You need to swipe your Hokie Passport to get into 106 and be in a CS class (if you are not a major or a minor). It is open 24/7.
Force-add: A procedure to add a class that the timetable of classes lists as full. For the CS Department this involves filling out a form on the first day of the class and waiting to hear from the CS Department for the results. Filling out a force-add form does not guarantee a spot in a class. If you are not added to the class your only option is to take the class the next semester it is offered.
Koofers: A database of professor reviews and past tests. (www.koofers.com)
Piazza: A forum board that is used to ask questions about assignments. You can post questions anonymously or with your name. TAs, students, and professors can provide answers.
Plan of Study: An outline of the classes to take each semester.
Web-CAT: Coding assignments are submitted to Web-CAT for grading in CS 1114 and 2114. Web-CAT runs your code and compares its behaviour to the expected behaviour. It also strives to teach proper code formatting and practices so it will meticulously take points off if a line of code is even one space too far to the left or right.

Instructions

Below are some general guidelines to making it through the first two computer science classes. There aren't many materials necessary in these early classes, the textbooks are optional unless the class does homework from the book. You will, however, need a computer of some kind. There are not many situations where professors will be sympathetic to computer trouble, so make sure you have multiple copies of your work. Invest in an external hard drive and backup your files regularly.

1. Enroll in your respective CS course, via Course Request and the Timetable of Classes. If you have AP, IB, or transfer credit see your advisor for advice on which CS course to take first. Either way see an advisor as soon as possible to develop a plan of study.

Registration Links

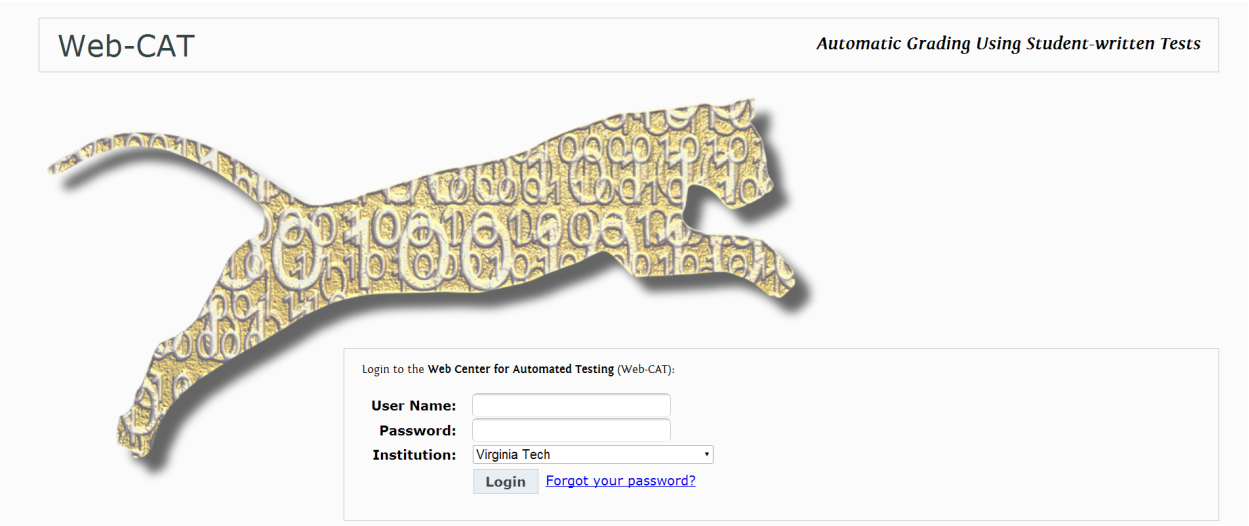
You have met all the requirements for registration. You should be able to register for classes.

In Progress Registration processes are displayed to the right. Click on the specific process for access to the term selection page. For your convenience, the Timetable of Classes opens in a new window.

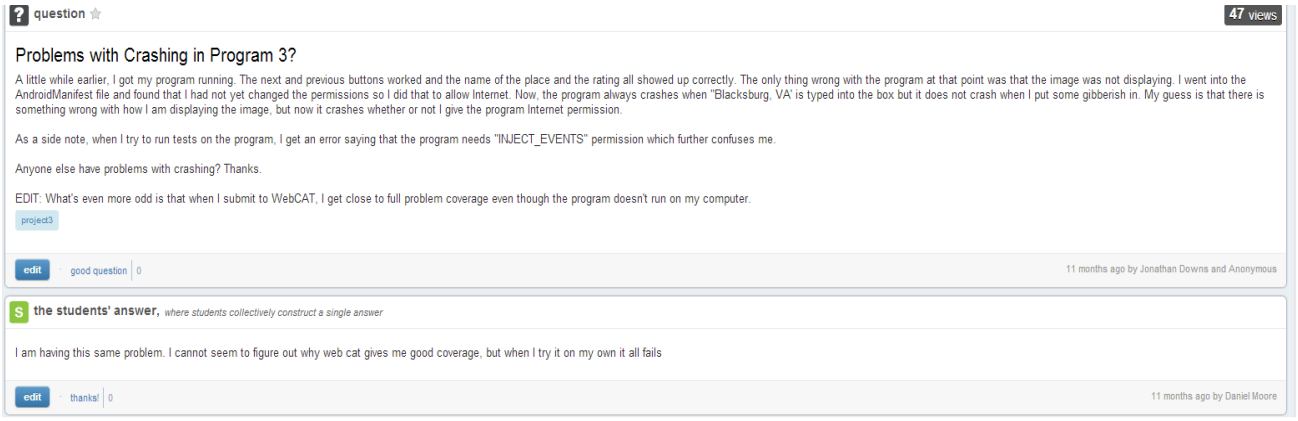
Term	Process	Registration Type
Spring 2014	Timetable of Classes	View Courses
	Course Request Results	View Results
Summer I 2014	Timetable of Classes	View Courses
	Course Request Results	View Results
	Drop/Add	Drop Courses
	Drop/Add	Add Courses
Summer II 2014	Timetable of Classes	View Courses
	Course Request Results	View Results
	Drop/Add	Drop Courses
	Drop/Add	Add Courses
Fall 2014	Timetable of Classes	View Courses

2. Attend class. This might seem like common sense, but even if you have a background in programming professors will often give hints about tests and programs in class.

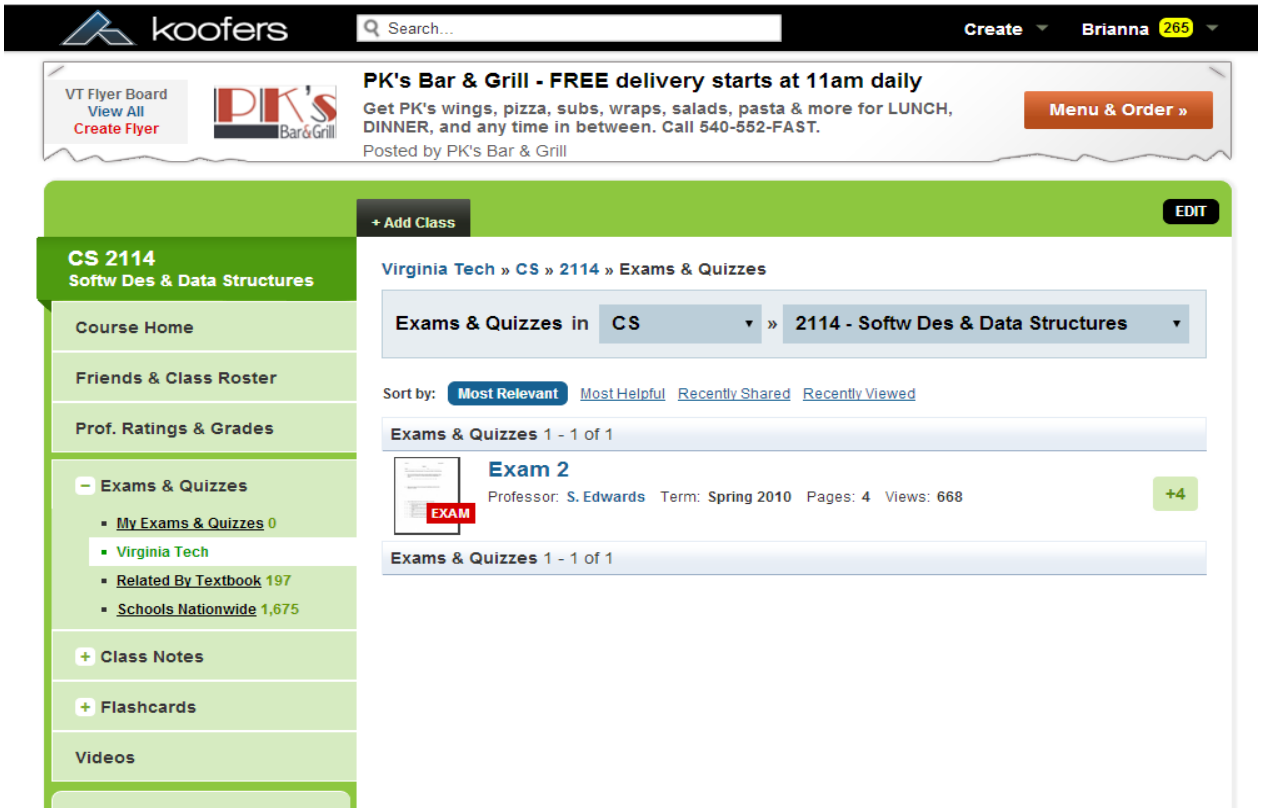
3. Write the assignments. Do not under any circumstances wait until the last minute to start your projects. Start at least a week before your deadline. In higher level courses a week before the deadline will not be enough time. Getting into the habit of starting early now will be highly beneficial in the long run. The Web-CAT queues get very long and slow right before an assignment is due.



4. Go to your TA with questions. If you find yourself falling behind or need help go to office hours. These are most likely held in McBryde 106, colloquially known as the CS Lounge. They are there to help you. The undergraduate TA's have taken these classes already and can offer good advice. You can also post questions on the Piazza forum.



5. Study for your exams. Paper and pencil exams on code are very different from sitting at a computer and writing code. Check Koofers for past tests, even if they are from a different professor so that you can get a feel for the style of questions that might be asked.


koofers
Search...
Create
Brianna 265
VT Flyer Board
View All
Create Flyer
PK's Bar & Grill - FREE delivery starts at 11am daily
Get PK's wings, pizza, subs, wraps, salads, pasta & more for LUNCH, DINNER, and any time in between. Call 540-552-FAST.
Posted by PK's Bar & Grill
Menu & Order »
+ Add Class
EDIT
CS 2114
Softw Des & Data Structures
Course Home
Friends & Class Roster
Prof. Ratings & Grades
Exams & Quizzes
My Exams & Quizzes 0
Virginia Tech
Related By Textbook 197
Schools Nationwide 1,675
Class Notes
Flashcards
Videos
Virginia Tech » CS » 2114 » Exams & Quizzes
Exams & Quizzes in CS » 2114 - Softw Des & Data Structures
Sort by: Most Relevant Most Helpful Recently Shared Recently Viewed
Exams & Quizzes 1 - 1 of 1
EXAM
Exam 2
Professor: S. Edwards Term: Spring 2010 Pages: 4 Views: 668
+4
Exams & Quizzes 1 - 1 of 1