What is computer engineering?  
Since engineering is the application of the principles of basic science to the solving of problems within constraints (that is, building things!), computer engineering is engineering applied to computers and computer-based systems. In other words, computer engineers build computers such as PCs, workstations, and supercomputers. They also build computer-based systems such as those found in cars, planes, appliances, electronics, phones, communication networks, and many, many other products. Computer engineers typically design not only the hardware, but also much of the software in computer-based systems.

What set of skills do I need to be a computer engineer?  
All scientists and engineers need a firm foundation in basic science and math. They also need to be able to work in teams and to communicate their ideas both verbally and in writing. Computer engineers specifically are comfortable with both hardware and software. Depending on where your interests lie, either one can be emphasized.

What job opportunities are there for computer engineers?  
Computer engineers work for computer companies such as Intel, HP, and Texas Instruments, and also in industries that build or use computer-based systems, such as telecommunications, automotive, aerospace, etc. Many computer engineers also get jobs as programmers. While they have less programming experience than computer science graduates, their understanding of hardware gives them an advantage in dealing with overall systems.

Why is computer engineering in the same department as electrical engineering?  
As long as computers are built out of electronic circuits, computer and electrical engineering will be closely related. As to why computer engineering and computer science are typically in two different departments can be attributed to accidents of history and to opinions held by some that the disciplines are broad enough that you have to separate them somewhere.

# What's the difference between computer engineering and computer science?

* Computer engineers build hardware while computer scientists generally do not. However, computer scientists certainly know enough about hardware to analyze computer system operations and to interact with hardware engineers.
* Computer scientists know more about underlying theory of computation, programming languages, and operating systems. While computer engineers often work as programmers, most system level programs such as programming languages and operating systems are designed by computer scientists. However, computer engineers usually write the programs for computer-based systems.

I can't decide whether to do computer science, computer engineering, or electrical engineering with a computer option!  
If you don't much care how computers work, then the computer science program is for you. Also, if you are interested in the nature of programs and languages rather than just writing programs, that's computer science, too. If you are interested in hardware, or in the way computers work, or in building systems with computers in them, then that's computer engineering. If you are mostly interested in programming, the choice could depend on the types of programs; however, there's a lot of overlap.

I don't see too many women engineers. Are women successful in computer engineering?  
To be sure, women are underrepresented in most technical fields, but we see a greater proportion in computer engineering and computer science than elsewhere. As far as women being successful I can answer an emphatic yes! Typically, our women students get higher GPAs than men students and appear disproportionately more often on Dean's Lists, Outstanding Seniors lists and membership rolls of honor societies. Their job opportunities after graduation are usually outstanding.

# I have some other concerns about being an engineer,Is engineering for me?

Engineers have an undeserved reputation of not being "people friendly." Nothing could be further from the truth: engineers almost always work in teams and must interact with each other constantly. People skills are essential to being a successful engineer. To expand on this idea—the internet, that ubiquitous communication mechanism, was invented by engineers and scientists so that they could discuss their work with each other cheaply and conveniently. Also, many engineers leave the day-to-day technical aspects after about five to ten years and become managers, or go into marketing and even sales, the most people-oriented of all jobs. There they find their engineering backgrounds to be a huge advantage. In fact, many CEOs and entrepreneurs began as engineers.

What are the starting salaries for computer engineers?  
Of the students in our department who did well (not necessarily great, just well) everyone we know of who wanted to get a job immediately did so. Many had multiple offers. The average starting salary was slightly higher than the national average for starting computer engineers. For current information, contact the Engineering Career Center. The students who do really well tend to get recruited months before graduation, get higher starting salaries, and are long gone by the time the statistics are collected. On the other hand, students who just squeak by often take longer to find jobs and tend to get lower salaries. But it should be noted that employers don't look only at GPA; they generally put a great deal of weight on enthusiasm and communication skills.

What are career salary prospects for computer engineers?  
Longer term, if you were to become a typical successful engineer, you could expect your salary to increase steadily at in the ten plus years after you begin working. After that, your salary will very much depend on how much your expertise is in demand and whether you go into the business related aspects of your company, say management or marketing, or not. Of course, keeping up with your field is absolutely essential to advancing, or even remaining employable.