



THE ULTIMATE GUIDE TO
preparing computer science
students for graduation

PLURALSIGHT



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There's never been a better time to graduate with a degree in information technology or computer science. The job market is growing, wages are increasing, signing bonuses are common and opportunity is everywhere.

But competition for the best jobs is fierce. Helping your students develop the skills and knowledge they need when they interview for that first position is critical. This guide includes several things you can do to prepare them for a meaningful and successful career in the technology world.

Discuss career options with your students

Before students begin interviewing with perspective employers, they need to know their options. They'll make better choices about which jobs to pursue if you teach them about the different types of technology jobs and what kind of work each one does (see below for a list of job titles).

IT/CS careers for students to explore:

Software Engineer	Programmer
Systems Analyst	Game Designer
Business Analyst	Graphics Designer
Technical Analyst	Information Manager
Network Engineer	Data Modeler
Project Manager	IT Manager
Web Developer	Information Architect
Software Tester	Webmaster

A solutions architect works on a different set of problems than a PERL developer. An IT consultant's job will be very different from a data modeler's. And a game designer needs a substantially different skillset than a webmaster. Have students ask themselves questions like: What kind of work do I want to do? Do I want to focus on coding or design data systems? Do I want to be business focused or am I more comfortable in the technology world? Would I enjoy testing or troubleshooting?

Each type of work lends itself to a different career path. Helping students understand the types of work they will enjoy is the first step to finding a position that best fits their passion and skills.

Help students evaluate different industries

The kind of work your students choose to do will also differ depending on the company they work for. And while a few big technology employers like Google and Apple get most of the press, employment options go well beyond Silicon Valley. Virtually every industry from banking and health care to retail shopping and transportation needs the skills your students are learning.

Industries hiring IT/CS degree holders:

Technology solution providers	Insurers
IT services organizations	Accountants
Telecomms	Retailers
Technology consultancies	Media
Investment banks	Public services
Investment management firms	

Today's employers want workers who not only understand technology, but also how businesses operate. Students need more than a proficiency in programming languages; they also need to understand how their contribution helps the company grow. You can help your students acquire these extra skills by encouraging them to take elective classes in business and humanities, which will open their thinking to different problems and broaden their learning.

Give students opportunities to work on a team

A new graduate's ability to work with other programmers, project managers and technicians is important for landing their first job, earning promotions, and creating a successful career. Fortunately IT/CS degree programs have numerous opportunities for group projects and teamwork.

In addition to working with a team, students need to know how to talk about the experience and show how their contribution improved the work of the group. Prepare your students to discuss their team experiences with prospective employers by encouraging after-project reviews, where students talk about their contributions, celebrate successes, and determine what team members could have done better.

Employers need technology workers who can communicate, build relationships with coworkers, make helpful suggestions, and share their experience with others.

Do your students know how to build project task lists?

In addition to your student's technical skills, companies are looking for employees who can size up a project, accurately estimate what is involved, and create a task list for completing the work. By learning how to organize a project then executing on individual tasks, students gain a valuable employment skill.

Most employers aren't interested in hiring people who need to be micromanaged or directed on every task. Rather, they need employees who see the big picture, then figure out how they can best contribute to the success of a project—whether they are working in a waterfall or agile environment.

Encourage students to create a project portfolio

Showing a portfolio of programming work is often an important part of the first job interview. A good portfolio will help your students stand out from a crowd of other programmers who talk about their work, but don't take the time to show it.

Even if potential employers don't ask for one, a student's ability to show a collection of project work related to the job they are applying for is impressive. Help them assemble a variety of work samples—projects in different coding languages, individual and team assignments, as well as finished work they did on their own.

Be sure to tailor the portfolio to the type of work done at the company where your student is interviewing. Media companies will be interested in seeing very different work than a bank or retailer wants to see. A portfolio of game animations won't be of much interest to a telecom. Remind your students to keep the audience in mind when assembling their portfolios.

Personal projects will help them stand out

Of course, prospective employers are interested in what your students learned in college. But you should encourage students to go beyond their classwork and take on personal or side projects to grow their portfolios. If they don't have their own ideas for things they want to build, your students can join projects and get valuable experience online at coding sites like [topcoder.com](https://www.topcoder.com) or [hackerrank.com](https://www.hackerrank.com). To learn additional skills or programming languages not covered by the college curriculum, students might consider stackoverflow.com or github.com, where they can collaborate with and learn from other programmers. Or they can take online training like that available at Pluralsight—the world's largest library of online tech and creative training.

Help your students build a network

Networking begins at school, as students work with classmates and meet with professors and other administrators. But you could also encourage students to join local or national technology groups like IEEE-Computer Society (at [computer.com](https://www.computer.com)) or a local Association for Computing Machinery (ACM) chapter (at [ACM.org](https://www.acm.org)). These groups provide resources, tools, feedback, training and scholarships for IT/CS students and can lead to project work and employment opportunities. Membership in a technology club

or organization is a great way to expand a young developer's professional network.

Encourage students to prepare now for their job hunt

You probably won't cover this in great detail in class, but encouraging students to create a resume, write a cover letter and practice interviewing can help them as they prepare for their job search. Like their portfolios, your students should write a different cover letter for each prospective employer, tailoring the specifics to the needs of that organization. Any practice they can get talking about their skills and how they contributed to a project, or reviewing the projects in their portfolio will pay dividends when they sit down for a real interview with an employer.

Teach students how to keep their skills current

Some students can't wait to graduate so they can put away the books and forget about their assignments. But learning doesn't end when they receive a degree. Computer science is a quickly evolving industry, with new programming languages, changing parameters and new technologies emerging every year. In their personal time, your students should take advantage of opportunities to keep their skills sharp, either through classroom or online learning or a mix of both.

The interest you take in your students' success pays off

Making sure your students know what they need to know by the time they leave college isn't easy. But, if you help them develop the skills listed in this guide, they'll be more prepared for their first step into the real world. Imagine, a few years from now, a student returns to campus to thank you for the time and effort you took to guide them. You went beyond simply teaching a course and took an interest in their lives. And it was worth it..

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