

Getting to Work – Tool #5: Effective Job Searching

How can you stand out among all other job applicants? Many people think that this means having a stellar resume, cover letter, and interview. While a solid resume, cover letter, and interview experience are essential, it is hard to write a resume and cover letter that stand out if you do not know the specifics of the job to which you are applying. In addition, in order to apply for the position that you want, you have to find it first! Effective job searching concentrates your time on jobs that fit you and match your skills. Fewer, well-thought-out applications are likely to yield better results than hundreds of copies of a generic application sent to as many companies!

The online job search

Don't search for "physics"!

Physics students usually start their job search by entering the word "physics" when exploring large job databases, and the results are usually disappointing. The word "physics" will not return nearly as many results as there are jobs available to physics bachelor's degree recipients, because most of these jobs do not have "physics" in the title. The common job titles held by recent physics bachelor's recipients are a good place to start when searching online job databases. Note that these job titles are intended as a guide; they are not exhaustive or exclusive.

Go back to the list of common job titles—before you start!

Choose the right databases

There are many online job databases. While by no means an exhaustive list, the databases below are great options for physics students looking for STEM jobs. All of these sites have robust searching options, the option to upload a resume, and career advice.

SPS Jobs

<http://jobs.spsnational.org>

SPS Jobs is part of the American Institute of Physics Career Network and has hundreds of bachelor-level positions appropriate for physics applicants, as well as jobs for physics graduates at other levels.

USAJobs

www.usajobs.gov

USAJobs is the US federal government's official job list. There is a special portal for students and recent graduates to find internships and jobs. Jobs at NASA, NIST (the National Institute for Standards and Technology), and other federal agencies are posted on USAJobs.

Science Careers

<http://jobs.sciencecareers.org/>

Science Careers, the careers component of the journal *Science*, is a database of job postings from around the world for scientists of all disciplines, backgrounds, and experience levels. Although many of the positions are for PhD scientists, there are some that require only a bachelor's degree.

Engineer Jobs

www.engineerjobs.com

Engineer Jobs is an extensive database of engineering job opportunities of all types within the United States and Canada.

The Institute of Electrical and Electronics Engineers (IEEE) job site

<http://careers.ieee.org/>

This is another useful job database for engineering positions. There is a related portal for students looking for entry-level jobs at <https://www.aftercollege.com/organizations/ieee-entry-level-jobs/>.

The job fair

A job fair is a gathering of several employers in a central location who are there to meet with potential applicants. Job fairs can be themed around certain sectors (healthcare, for example) or may be more broad. Many schools host job fairs, but you can also find them at other community locations. The challenge for physics students attending job fairs is to know how to talk about their skills in ways that are meaningful to potential employers (tool #5). The representatives of an engineering firm at a job fair may not know that physics students commonly go into engineering positions with great success, so it is up to you to demonstrate with an appropriate resume (tool #6) that you are a great candidate. Even before you are ready to begin applying, however, it is a great idea to explore some job fairs to learn about what kinds of positions are available and what types of skills those employers are looking for. The following story illustrates many useful tips for attending a job fair.

An example experience: The job fair

The following article was written by Shouvik Bhattacharya, an SPS summer intern who worked on the Career Pathways Project. Attending a job fair can be an enlightening experience and can give you the opportunity to practice your elevator speech (tool #3), talk about your knowledge and skills, and communicate why someone with a physics degree is qualified for many different kinds of jobs. In addition, the list of common job titles may help you communicate effectively with job fair hosts unfamiliar with the kinds of jobs that are often done by individuals with a bachelor's degree in physics!

My First Visit to a Job Fair

by Shouvik K. Bhattacharya

I take a deep breath and step inside the fair pavilion at the Ronald Reagan Building in Washington, DC. There are about thirty small booths occupied by prospective employers at this summer career expo sponsored by the magazine *Equal Opportunity*, and already four of them are crowded. The University of Virginia booth looks less crowded, so I decide to visit there first.

A woman welcomes me with a warm smile and gives me a pen with the university's name printed on it. She says that the human resources department recruits applicants from diverse academic backgrounds, including physics. An applicant with a STEM (science, technology, engineering, and mathematics) background is expected to have the qualities of coordination and collaboration. These are valuable skills that employers care about. She shares her contact information and also requests my resume in turn.

I wander off for a bit and then enter the US Bureau of Labor Statistics booth. I expect that someone who completes a bachelor's degree in physics is likely to have taken some statistics courses, and that is what motivates me to stop by this particular booth. But the representative informs me that a physics major should apply only if he or she has a strong mathematics and statistics background.

The next representative I speak with, at the Boeing Corporation's booth, sounds very positive and enthusiastic. She tells me that the company has many entry-level openings. She advises me to create a profile on Boeing's career website and to prepare a resume based on the jobs that are available. She emphasizes that being flexible about relocation and having a positive attitude toward learning new things are essential to an employee's job security. I realize that all representatives at the job fair are actually there to help applicants, and I feel confident thereafter.

Then I stop by the job booth of the US Nuclear Regulatory Commission, where I am handed a job list. This government agency definitely hires physics undergraduates. The representative asks me to share this information with anyone who would be interested in applying for the entry-level openings. Job titles included general engineer and scientist, both of which require a minimum cumulative GPA of 2.8 overall and 3.4 in the applicant's major. The job descriptions include writing, critical thinking, decision making, inspection, and conformity research as the integral duties that employees would have to perform in this job. I get a little excited seeing all these details. So far this has to be my best experience of the job fair, as I get to see an example of how a physics major can start working after a successful degree completion.

The US Air Force posts their jobs through the USAJobs website, which I learned at its booth. The representative at the IRS booth tells me that living in a big city can seem tough and challenging, but ultimately it turns out to be beneficial, as dynamic city life motivates employees to perform better. He also tells me that it never hurts to be ambitious. A representative from the Defense Intelligence Agency asks me why I have not highlighted in my resume the electronics courses that I had taken. The resume I had handed him focuses on my research background in observational astronomy. I realize that having a few different versions of my resume would be beneficial.

In the beginning, I felt a little overwhelmed, but I soon realized that all of the representatives are there to help and answer questions. Looking back at it now, I know what I have to do when I attend my next job fair. The role I played at this fair might be considered that of a surveyor, rather than that of a potential job seeker. I didn't prepare different versions of my resume, highlighting different skill sets. That is the first thing one should do before attending a fair, as the resume serves the role of a conversation starter. Wearing business clothes is also a must, because it shows how interested and serious one is about finding a job. I made a few new connections at the job fair, and I've now sent follow-up emails to each, conveying my thanks for spending their valuable time with me. The job fair visit was an absolutely amazing learning experience for me.

Networking

A third way that many people find employment is through taking advantage of their network (tool #3). Your faculty members, colleagues, family, friends, LinkedIn contacts, career professionals on campus, contacts from professional society meetings, and other people that have become part of your network are excellent resources when it comes to job searching. Do not be afraid to tell everyone that you meet that you are looking for a job. Most people are eager to help students by offering advice, leads, and sometimes even making introductions.

When reaching out to professional contacts, be sure to remind them how you received their name or where you met. In many cases it is best not to ask for a job directly, but to ask for advice or leads instead.

How do you know when you have a good match?

By reaching out to your contacts, effectively searching online databases, and visiting local job fairs you can hear about a wide variety of job opportunities. But how do you know when you have found a good match?

- Zero in on the qualifications. In many cases, you do not need to meet all of the qualifications for a position as long as you present a strong case in your cover letter and resume. For example:
 - If a qualification is “two years relevant job experience” and you are a new graduate, you may still be considered if you highlight the relevant experience you have gained while in school in your cover letter and resume.
 - If a job qualification lists “engineering degree” and you have a physics degree, you may still be considered if in your cover letter and resume you highlight how well your physics degree prepared you for an engineering position.
- In other cases, qualifications may be non-negotiable or there may be several that you do not meet. If you are not sure whether you qualify, contact the company and ask before you invest too much time in preparing your application.
- Look for key words. As you read through a job ad, look for key words that explain what the company is looking for and the responsibilities of the position. Write these down as you go. After reviewing the description, assess how well the key words match up with your skills, abilities, and interests.
- Explore the company through online searches and see whether their mission and reputation align with your interests and ambitions.
- Other factors to consider:
 - How long has the position been listed? If it has been listed for several weeks, it may be worth contacting the company first to see whether the position is still open.
 - Is the salary and location acceptable to you?
 - Carefully reviewing job ads that interest you will enable you to be more efficient with your job search. Discarding jobs that do not seem like a good fit will enable you to focus your attention on crafting thoughtful, targeted resumes and cover letters for jobs that are worth exploring.

Exercise - Tool #5: Effective Job Searching

⇒ Carry over the job titles you are most interested in from the bottom of exercise 1.

Job titles worth learning more about:

⇒ Choose a few online job databases and search for those job titles. Print a few positions that sound interesting to you.

⇒ Choose one of the positions and use it to complete the boxes below.

⇒ Ask yourself, *Is this job worth pursuing?*

⇒ Repeat for additional job advertisements. (You will need more copies of this page.)

Position title:

Position title:			
Key words or phrases describing what the company is looking for in a candidate	How well does this match my skills and abilities?	Key words or phrases describing the responsibilities of the position	How well does this match my skills and abilities?
Qualifications listed in the job description	How well do I meet these qualifications?	Notes about the company mission, reputation, salary, location	How well does this align with my interests and ambitions?