

# Job Search Tips for Engineering Students

## Getting Started

Are you looking for an internship or job, but don't know where to start? You have many resources at your fingertips! First, you must identify what kind of job or internship you are seeking. Next, start networking to identify job openings of interest to you and employers for whom you would like to work. Potential resources to tap include the SDSU Career and Academic Planning (CAP) Center, faculty, current or former employers, professional organizations (including student chapters), family, and friends.

In addition to helping you identify job openings and employers in your field, these individuals can help you recognize your strengths and weaknesses so that you can market yourself well as you prepare your application materials. The key is knowing which skills and qualifications employers are seeking in engineering candidates and communicating those qualities effectively in your job search materials.

## Skills/Qualifications Desired in Engineers

The best way to discover which skills employers are seeking is to review job descriptions of interest to you. Most job descriptions will state the specific qualifications required for a particular job. When reading the description for a job that you are applying for, highlight or underline key credentials required for the position, then be sure to identify those skills in your resume and/or cover letter.

If you do not have a job description or if the job description is unclear, talk with employers or faculty in your field, or with alumni and other students who have full-time employment or internship experience to gain insight into key qualities and experiences you should emphasize in your application materials. Consider the following skills and qualities employers seek in engineers.

- Adaptability to change
- Common sense
- Communication skills
- Creativity
- Critical thinking
- Diplomacy
- Innovation
- Inquisitive mind
- Knowledge of the field
- Leadership skills
- Listening skills
- Mathematical skills
- Mechanical aptitude
- Negotiation skills
- Organizational skills
- Problem-solving skills
- Resourcefulness
- Self-motivation
- Teamwork
- Technical writing skills
- Time management skills

*Source: This list of skills was adapted from various engineering job descriptions and job search websites.*

## The Interview: Preparing for Technical and Behavior-based Interview Questions

Many engineering interviews will feature technical interview questions, such as "Explain the concept of polymorphism in an Object Oriented development." Below are some tips to help you answer technical questions.

### *Preparing for Technical Interview Questions*

- Review job-related skills or experience listed on your resume and be sure you can describe them in depth.
- Read industry specific publications.
- Talk with professionals in the field.

### *Answering Technical Interview Questions*

- Be sure you understand the question; ask for clarification if necessary.
- If you don't know the answer, do your best. Employers are evaluating your thought process and problem-solving abilities as much as your answer.
- Use pictures and diagrams if they will help you explain the concept.
- Be direct, solid, and assertive.
- If you absolutely don't know, say "I don't know" rather than giving incorrect information.
- Even when you say "I don't know", try to present yourself in a positive way. For example, instead of just saying "I don't know" consider saying, "I don't know the answer to that question. I've never been in that situation before; however, if I had to address that question in the workplace, here is what I would do..."

*Source: Berkeley University of California Career Center*

*Behavior-based Interview Questions:* Behavior-based interview questions are designed to help employers predict candidates' future performance based on their past performance in a similar situation. When asking behavior-based interview questions, employers will inquire about specific examples of how you have used key skills.

*Sample Behavior-based Interview Questions:*

- Tell me about a time you had to work with a difficult customer.
- Describe a situation where you collaborated with others to create a quality project.
- Give me an example of a time when you had to meet multiple deadlines.
- Tell me about a time when you had to make an important decision.

*Responding to Behavior-based Interview Questions:* When responding to behavior-based interview questions, use the S.T.A.R. approach.

- S = Situation: Describe the situation in which you were involved.
- T = Task: Tell the interviewer what task you needed to complete.
- A = Action: Explain what steps you took to complete the task.
- R = Result: Inform the interviewer of the outcome of your efforts.

Obviously, you will want to share examples of times you experienced success. Review the key skills for the position and prepare some behavior-based answers that demonstrate those skill sets.

### **Tips from Engineering Employers**

Below is advice from employers in the engineering field about how to prepare for your job search.

- Read the job description and target your resume according to the required skills and qualifications.
- Understand the job description and be able to articulate how your skills and experience fit the position.
- If you can't talk in depth about an experience or project, don't list it on your resume.
- Brush up on any skills or information on which you are "rusty" prior to the interview.

*Source: Berkeley University of California Career Center*

### **CAP Center Resources**

If you need help with your job search, contact the CAP Center staff. We have various resources to assist you. Through the CAP Center, you can access workshops on Resume Writing/Job Searching and Interview Skills, schedule individual appointments with one of our staff members to gather information about the job search process, have application materials critiqued or take part in a practice interview.

You also can register with our online system at <http://careercenter.sdstate.edu>. The system allows you to search and apply for jobs in your career field, post resumes and other job search documents, sign up for on-campus interviews, research employers that have recruited SDSU students, and receive notices regarding job listings, on-campus interviews, and campus events.

### **SDSU College of Engineering Links to Job Search Information**

Agricultural and Biosystems Engineering: [http://abe.sdstate.edu/Careers\\_a.cfm?page=power\\_machinery%20careers&degree=ABE](http://abe.sdstate.edu/Careers_a.cfm?page=power_machinery%20careers&degree=ABE)

Biomedical Engineering: <http://www3.sdstate.edu/Academics/CollegeOfEngineering/BiomedicalEngineering/Jobs/Index.cfm>

Computer Science: <http://www.engineering.sdstate.edu/~compsci/compsci/layout.php>

Electrical Engineering: <http://www.engineering.sdstate.edu/~eweb/>

Physics: <http://www.aip.org/statistics/>

<http://jobresource.com/groups/ccenter.asp?fct=1&ID=957895714>

Software Engineering: <http://www3.sdstate.edu/Academics/CollegeOfEngineering/SoftwareEngineering/Index.cfm>

### **National Associations with Job Search Websites**

American Association of Physics Teachers: <http://www.aapt.org/CareerCenter/index.cfm>

American Society of Civil Engineers: <http://careers.asce.org/careerdev/>

American Society of Heating, Refrigerating, and Air Conditioning Engineers, Inc.:

<http://www.ashrae.org/template/AssetDetail/assetid/40560;jsessionid=baa-k5itlcDstr>

American Society of Mechanical Engineers: <http://www.asme.org/Jobs/>

International Microelectronics and Packaging Society: [http://www.jobtarget.com/home/index.cfm?site\\_id=117](http://www.jobtarget.com/home/index.cfm?site_id=117)

Society of Automotive Engineers: <http://www.saecareercenter.org/>

Society of Women Engineers: [http://www.swe.org/stellent/idcplg?IdcService=SS\\_GET\\_PAGE&nodeId=11&ssSourceNodeId=5](http://www.swe.org/stellent/idcplg?IdcService=SS_GET_PAGE&nodeId=11&ssSourceNodeId=5)