GSAC Career Search Survey Summary

Non-Academic Careers

All information is based on survey respondents who work in non-academic job positions (industry or national labs)

Breakdown of survey respondents by area of work (16 respondents total):

Aerospace, Automotive, and Defense	1
Alternative Energy	2
Biotechnology, bioprocessing, or biomolecular/biological engineering	3
Catalysis	3
Coatings	1
Lithographic materials	1
Polymers	1
Semiconductors	2
Specialty chemicals	1
Technical Consulting and Systems Engineering	1

Is their work related to their PhD research?

Yes	6
No	10

How long should a career search take?

Median time based on survey: 6 months (Avg = 6.5, S.D. = 4 months)

Suggested starting time of search:
Consensus: ≥6 months before graduation

Specific advice from respondents:

"10 months before graduation: start looking for job offers, get an idea of what is possible, get information.
6 months before graduation: submit applications.
4 months before graduation: interviewing (process may take 3-4 months).
Actually more important than the timeline is the time you start applying. Best time is to apply between January and March because then companies start looking for people to begin between May and August."

"Start looking 1 year before you KNOW you will graduate. Submit applications about 9 months before you graduate (sooner if for national labs). Interview 6 to 9 months before you plan to graduate. You will likely get offers 3 to 6 months before you plan to graduate. Most companies are flexible on starting date with PhD candidates, so do not worry. I waited 6 months from when I accepted to when I started."

"For industrial R&D, either: (1) a position needs filled quickly for an immediate need, in which case it is best to apply a few months before the expected start date or (2) a position needs to be created by a PI for a high quality candidate, in which case it is good to network with a PI a year before graduation because the PI may need upwards of a year to get internal or external funding for a new hire."

"--Start a full calendar year before your earliest anticipated graduation date.
--Many companies hire in cycles (spring, fall), so try to be active in your job search for two of these cycles.
--Starting this far in advance will give you enough time to prepare all your application materials without the added pressure of writing your thesis."

"Large companies with a lot of resources run fall and spring hiring campaigns. It takes a couple months before you even hear back from them regarding scheduling interviews. For instance, if you apply in the fall, you might hear back in Dec/Jan for scheduling a Feb/Mar interview."

How to apply for jobs

<u>Where to find jobs</u>

Suggested resources:

- Networking, Personal Contacts*
- Company websites*
- UC Berkeley career fairs
- College of Chemistry
- Your Advisor
- Former group members
- LinkedIn
- Nature Jobs, Science Jobs (websites)
- The Cal career center

- Craigslist.org
- Conference job boards
- Professional organization websites (AIChE, ACS, etc.)
- Biospace.com, Indeed.com
- State or regional bio websites (e.g., bay bio, washingtonlifescience.com, etc.)

*An asterisk indicates that the resources was suggested a large number of times.

Networking is one of the top methods of finding a position.
Importance of networking to survey respondents' job placement:

Very important	9
Somewhat important	5
Not important	2

The UC Career Center is not just for undergrads – it could potentially be helpful.
Survey respondents on campus career center:

Very helpful	1
Somewhat helpful	4
Neutral	3
Somewhat unhelpful	2
Very unhelpful	0
Not applicable	6

<u>How many jobs should you apply to?</u>

It varies widely among survey respondents
Median of survey results: 11 (Avg = 17.5, S.D. = 17.5)

In addition, the number of applications relative to the number of offers received (applied:received) varied dramatically and does not correlate with area of interest:
Ranges: 1:1 to 50:1
Median = ~4:1
Note these are ratios, not necessarily actual application/offer numbers.

Other advice for searching or applying to jobs:

"Network."

"Reaching out through personal contacts is really important. When my company posts a position we often get hundreds of resumes, and no one has time to look through them. A personal connection bypasses that whole mess."

"Job postings on specific company websites or on things like Monster are good. Smaller companies or research groups looking to fill a specific position will reply much more quickly and tend to have a rolling job search at any time of year. The bulletin boards at conferences also have a lot of leads. Networking there can be very helpful."

"I would recommend attending all the career fairs and information sessions to network with hiring representative and to learn about the positions at the company. Look to submit your application in the fall if you are graduating in the Spring. Also, be sure to keep checking companies websites for openings because they frequently are posted year round. You should seek to lock down an offer in 3-6 months before you think that you will finish. This will set a deadline for you and your adviser, and make sure that your PhD doesn't drag."

"--It is never too early to start looking.
--Keep in contact with your former group members, as they can be just as helpful after they graduate as they were when they were there."

"Don't necessarily look for just jobs in your specific PhD research field (unless you absolutely want to stay in that field). A lot of times the techniques you know can be applied to other research fields and those companies will consider you even if you've never done work like that before. There is a lot of on the job training. And it can be fun learning something new. You don't have to stay there forever if you don't like it."

After the application - Interviewing and Follow up:

Topics that came up the most in interviews besides PhD research:

- Internships or previous industrial experience*
- Published papers*
- Teamwork, collaboration
- Past leadership experience
- Proposal writing
- Non-academic persuits

*Asterisk indicates the most commonly cited topics

For industrial positions, does the number of papers you publish influence your hiring?

Survey respondents on whether they think it affected their hiring:

Strongly agree	1
Somewhat agree	4
Neutral	6
Somewhat disagree	4
Strongly disagree	0

"Be professional. Dress up. Know everything about the company and what position you want. Be able to explain, "Why do I want to work at X". Steel your mind because in this economy it might take you many interviews until you land a job (it took me ~20), but I eventually landed my dream job."

"Learn how to sell yourself. Most good interview prep books will teach you how to do this. Also use those books to practice interviewing. Go to career fairs and conferences and get used to tooting your own horn. Have multiple people review your resume. "

"Note, an industry interview is much different than an academic talk. You need to add a lot more background and motivation for an industry talk, because not everyone will have an appropriate knowledge of the field. It would also help to have simple analogies between your research conclusions and common things most people know."

"You can be persistent in following up with a company if they don't get back to you, but don't beat yourself up if you don't get the job in the end. You will likely never know why you didn't get the position. It may have just as easily been back-filled internally, the funds may have dried up, or the company's needs may have changed. See if there is anything that you can take away from your interview process, but don't dwell on it for too long, and keep searching."

Choosing a job

How much time should I expect to be given to respond to a job?
Medium = 2 weeks (avg. = 3.3 weeks, S.D. = 2.7 weeks)

What is a reasonable expected starting salary for a new PhD?
Medium = $97,500 (Avg. = $96,500, S.D. = $6,900)

Considerations:

"If you are going straight into industry, try to find a position that will give you exposure to more than just your specific area of science. In a big company that might mean going on a rotation program. In a small company that might mean making sure you get to interface with business/leadership aspects of the company on a regular basis. "

"Think about what you want to do in 5 years and how the first job may help you with that goal"

"Have an idea of your long-term plan and how the job will fit into it.
Be strategic and be patient, get the job you want."

"Be very open to different possibilities, a job should not necessarily have to be an extension of your graduate research."

"Who are the people I am going to be working with. Take a long look and figure out if these are the types of people you want to be traveling to far flung places with, eating your dinners with, and staying at the same hotel."

"What are future possibilities in the company? Is the company in good health?"

Final Advice

What do you wish you had known when looking for your first position?

"The industry (or industry sub-sector) that you find yourself in is more important than the company or the position. Once you establish yourself as having experience in a particular industry, you will be able to move around without undue difficulty, but it is rather difficult to change industries."

"Having a theory based thesis makes it more difficult to get an applied job. I imagine this seems like a no-brainer, but it was far from my mind when I started graduate school 5 years prior. Not that I would change my thesis (well, for that reason anyway), but it is something to keep in mind. "

"I wish I had a better feel for what acceptable starting salary and benefits packages look like. I had no idea what a good 401K or health plan looked like."

"I wish that I had known that most industrial biotech positions for PhDs either require previous industrial experience or a post-doc."

Is there anything you wish you had done differently?

"I wish I would have taken more time off after turning in my thesis. Don't be afraid to ask to delay your start date if you want to."

"More networking during my PhD"

Other thoughts:

"You will likely have to work with non-engineers and non-scientists at some point. These people are not easily swayed by things like facts and data. But do not be discouraged. Just remain true to the facts and data, be diplomatic in your relationship, and hope for the best!"

Academic Careers

All information is based on survey respondents who work in an academic job position (post-doc or faculty)

Breakdown of survey respondents by area of work (5 respondents total):

Biotechnology, bioprocessing, or biomolecular/biological engineering	2
Alternative Energy	1
Molecular biology and virology	1
Not specified	1

How long should a career search take?

Median time based on survey: 6 months (Avg = 5.2, S.D. = 2.4 months)

Specific advice from respondents:

"For an academic track these days, the job out of the PhD is a post-doctoral appointment. For this position I would recommend starting at least one year prior to one's expected finishing date to network, start writing fellowship applications, etc. A faculty job is a multi-year search which involves networking, formulating research philosophy and objectives, and the like. For a faculty job, I would have the research statement written a year before the putative start date; the openings are posted usually in a 2-month window from Labor Day - Nov 1, and submission thereafter. One usually has until at least April to weigh different offers."

"For postdoc positions, availability of positions often depends on if the mentor has a funded project or if you are willing to apply for fellowships. I recommend starting to look for a position and applying a minimum of 6 months before your planned graduation date (if not earlier)."

"-12 months, searching for openings
-8 months, submitting applications
-6 months, interviewing
-5 months, receiving job offers
-4 months, accepting job offers?"

"It is important to not wait too long to apply for positions. I started applying for post-doc positions 6 months before my graduation date and had a position lined up 2 months before my graduation date."

How to apply for jobs

<u>Where to find jobs</u>

Postdocs:
Current PI's Contacts
Networking
Word-of-mouth
University/PI websites

Faculty Positions:
Other faculty
Nature jobs, Science jobs
ACS online and print postings in C&EN
Material research society
Flyers to departmental heads.
Many schools list job openings on their departmental websites

Networking was listed as "very important" or "somewhat important" for securing a position for all survey respondents.

<u>How many jobs should you apply to?</u>

Varies greatly, especially in a small sample set
Median = 5 (Avg. = 4.4, S.D. = 3.7)

<u>Other advice for searching or applying to jobs:</u>

"...an advisor's reputation (or lack..) can open many doors in the academic setting. I was able to secure the initial post-doc position partly on account of my advisor's reputation."

"Look for fellowships to do post doc research. When you apply they often have many locations that are eligible to work at. But those have very specific deadlines for applying and it is early so start looking, even if you think you have a year left, just so you are aware of options."

"Apply to as many postdoc fellowships as possible, but this is generally after you are in your postdoctoral lab. It is never too early to start thinking about it though."

"for a career position: apply everywhere. absolutely everywhere. "

After the application - Interviewing and Follow up:

Topics that came up the most in interviews besides PhD research:
Papers published

i.e. interviews are all about research

"Find something that you are passionate about and go after it."

"In general, top schools are looking for breadth (a good number of papers) and high impact (one or two high profile papers). Most new hires will have both of these, save for a few institutions willing to take more risks with new faculty (each hire is a large investment)."

Choosing a job

What is a reasonable expected starting salary?

Post-doc: 40,000 (N=3)

Faculty: 80,000 (N=2)

Considerations/Advice:

"Get as far away from Berkeley as possible - you want to experience a new environment with new researchers."

"If you plan to go on to a faculty position, it is extremely important to evaluate your potential postdoctoral lab: Is there a good record of placing postdocs in academic jobs? Where have their people ended up? How many leave science? Is the PI willing

to support and go to bat for you? Not all labs are good at fostering future faculty and it is easy to tell from their history."

"I was most interested in joining a lab where I was excited about the types of projects that I would get to work on and a lab that I could learn a lot from joining. I felt it was important to be able to expand my "toolbox" -- not join a lab where I would be doing the same thing that I did for my Ph.D."

Final Advice

What do you wish you had known when looking for your first position?

"I wish I was better prepared for writing post-doctoral fellowships; many of these opportunities expire after 12 months of the post-doc start-date, so you only have one chance to get these grants if you don't start writing before your thesis."

"I wish I had known more about the realities of the academic job search. The career center presentations, while very informative and helpful, painted an overly rosy picture (especially given the economic downturn) "

Is there anything you wish you had done differently?

"Applied for a postdoctoral fellowship"

Other thoughts/advice:

"When you start your postdoc, do not rush into the research. Take the time to think of the bigger picture and broader questions. The questions should be big enough to possibly provide the foundation for a new lab. Take your time and think things through."

"Don't do a postdoc unless you want to become a faculty"

"You can always do a post-doc!"

"Start early, start often."

Academia vs. Industry

"Honestly assess how likely you will be able to secure a faculty job given your academic record. Pay for a post-doc is extremely poor relative to your education. In the competitive biological sciences field, 5- or 6- year post-docs are relatively

commonplace. So know what you are getting yourself into - if you don't appear likely to get a faculty job, there are more productive and fruitful uses of your career."