



# Physics Career Guide

*An introduction to career resources at UC Berkeley and beyond*

## Welcome to the UCB Physics Career Guide!

It is never too early (or too late) to start considering what you will do with your Physics degree. If you decide to go straight into a career after graduation, there really are a HUGE number of job possibilities. However, it's important to keep in mind that many job titles will not contain the word "physics." For that reason, you must dedicate time to explore what options are available to you. As an example, here are some job titles from the 2018 UCB Physics graduating class:

- Technical Consultant
- Software Engineer
- Product Manager
- Research Assistant
- Data Analyst

So, how do you link your Physics degree with your desired jobs? Many employers understand the broad application of skills learned in pursuit of a Physics degree. However, it's critical that YOU can articulate what you have gained during your work as a Physics student. Those long, hard hours spent on your 111 labs, countless evenings working in the reading room, and participating in poster sessions have done more than help you pass your classes. You've gained experience with time management, honed your critical thinking skills, learned to work as a member of a team, and become skilled at explaining complicated problems and their solutions. Distilling down what you've accomplished will help you as you review job descriptions and match your skills with an employer's requirements.

This guide is intended to expose you to all the resources available to you in your career search. There are online tools, on-campus resources, advisors and events – all dedicated to help you succeed, whether you are a first semester freshman or a second semester senior. We encourage you to explore all of these resources and find what works best for you.

We look forward to working with you during this exciting journey!

The Physics Student Services Advisors

## Job Climate for Physics Undergrads

This guide will address four main aspects of the current job climate for Physics students – industries, employers, job titles, and salary. For the purposes of this guidebook, these areas are broadly covered to set expectations and prepare you for your job search. If you'd like to drill down in on any one of these areas, there are many resources available online to dig deeper (many of those resources are listed in this guide).

### Industries

Physics BA recipients are sought after in many industries because of their critical thinking and problem-solving skills. Other highly regarded physics skills include advanced mathematics, inventiveness, and the ability to learn new technologies quickly. It is no surprise, then, that the most common industries to employ Physics BA recipients are:

- Engineering
- Computer Hardware and Software
- Research and Technical
- Education

However, this is by no means an exhaustive list. A quick look at Physics BA recipients on LinkedIn, turns up roles in Transportation, Finance, Healthcare, and Energy. Though the skills listed above are very well suited to careers in engineering and research, they are highly valued in nearly every industry. It's important to realize that almost any industry is open to you. And it's incumbent upon you to research your options, recognize your strengths, and know what inspires you.

#### *Learn more:*

<https://www.spsnational.org/sites/default/files/files/career-resources/careersfactsheet.pdf>

<https://www.linkedin.com> (you must have an account to access alumni data)

## Employers

Just as we saw with industry, nearly any employer is going to be interested in the set of skills a Physics bachelor degree recipient brings to the table. The majority of Physics bachelor degree recipients go into the private sector (think Apple, Adobe, Twitter, or Google), with the next largest number of graduates working in a college or university setting. The American Institute of Physics (AIP) publishes a list of employers who have recently hired Physics bachelor degree recipients by state. Here is a sample of employers from that list:

- Amazon
- Apple
- Boeing
- California Energy Commission
- Deloitte
- Department of Defense
- Facebook
- Lawrence Hall of Science
- Rip Curl
- Salesforce.com
- SpaceX
- Twitter

There are almost 180 employers on AIP's list, which they state is only a portion of the employers who have hired recent Physics bachelor degree recipients. This is confirmation that your skills are highly valued across a very broad range of businesses.

### ***Learn more:***

> <https://www.aip.org/sites/default/files/statistics/employment/bachinitemp-p-14.1.pdf>

> <https://www.aip.org/statistics/california>

## Job Titles

Few job titles contain the word “physics,” especially those outside of research functions. As you utilize job search websites (many of which you’ll find listed in this guide), try to broaden your search beyond “physics” keywords. Here again, it’s important to know what you are good at and where your interests lie. Try searching by company or job function (job functions might be marketing, engineering, customer support, or human resources).

Due to the broad set of skills you will obtain in the pursuit of your Physics degree, the job titles you are qualified for will also be broad and varied. Many of the common job titles are fairly straightforward:

- Research Assistant
- Lab Technician
- Product Manager
- Software Engineer
- Product Engineer
- High School Science Teacher

However, some job titles might surprise you:

- Data Scientist
- Business Analyst
- Product Management
- Technical Support Staff
- Meteorologist
- Regulatory Affairs Director
- Prototype Engineer
- Architect

Here, again, it’s important to research your options! There are job titles within nearly every job function that are applicable to a Physics BA degree recipient. The takeaway here is to keep your job search broad and drill down as job titles and descriptions sound like a good fit with your skills and interests.

### ***Learn more:***

> <https://www.spsnational.org/sites/default/files/files/career-resources/careersfactsheet.pdf>

> <https://www.linkedin.com> (you must have an account to access alumni data)

> [https://www.payscale.com/research/US/Degree=Bachelor\\_of\\_Arts\\_\(BA\)%2C\\_Physics/Salary](https://www.payscale.com/research/US/Degree=Bachelor_of_Arts_(BA)%2C_Physics/Salary)

## Salary

Finding salary data on Physics BA degree recipients is not an exact science. There are many factors at play, including: single vs. double major, industry/job sector, and location. With that in mind, here are the most recent available numbers from several different sources.

- According to the UCB Career Center's survey of 2018 Physics graduating seniors (38 percent response rate), the average initial salary was \$75,985 annually. (Note: AIP's Physics Trends, "What's a Bachelor's Degree Worth," cited typical salaries for the class of 2015 between \$45,000 and \$70,000 annually. This is their most updated data.)
- According to the 2015 study "The Economic Value of College Majors," conducted by Georgetown University, Physics bachelor degree recipients earn the highest salary of physical science majors: \$81,000 annually.
- According to the "College Salary Report 2019" conducted by the website PayScale, early career pay for Physics bachelor degree recipients is \$60,700 annually. Mid-career pay is \$113,100 annually.
- The National Association of Colleges and Employers (NACE) "Winter 2019 Salary Survey" showed Physics majors projected to earn a starting salary of \$66,718.

Salary ranges are included in our overview because it's important to set your expectations about compensation. However, keep in mind that there are many factors that lead to overall job satisfaction. It is critical for most of us to be financially solvent, but it's also important to be inspired by what you do.

### ***Learn more:***

> <https://cew.georgetown.edu/wp-content/uploads/The-Economic-Value-of-College-Majors-Full-Report-web-FINAL.pdf>

> <https://www.payscale.com/college-salary-report/majors-that-pay-you-back/bachelors?search=physics>

> <https://career.berkeley.edu/sites/default/files/pdf/Survey/2018Physics.pdf>

> <https://www.aip.org/statistics/physics-trends/whats-bachelors-degree-worth>

> <https://www.utdallas.edu/career/docs/about/NACESalary2019.pdf>

## On-Campus Career Resources

This section will introduce you to the resources available to you on UC Berkeley's campus. We highly encourage you to try out each resource to see what works for you and where you are in your career exploration.

### Physics Department

There are many job and career related resources available to you right here in the Physics Department.

- **Advisors:** With decades of experience, the Physics Student Services team has a wealth of knowledge about the different career paths our students have chosen, and how they got there. Please stop by or make an appointment to talk about your career plans. Their offices are located in 376, 374 and 368 LeConte.
- **Workshops:** Over the course of each academic year, the Physics Department will host several career-focused workshops for undergraduates. These workshops will consist of presentations about available resources, panels with recent graduates of the program, and skill-building activities.
- **Networking:** This will be one of the best ways for you to make connections and hear about potential opportunities. Join <http://sps.berkeley.edu/> and/or <https://swps.berkeley.edu/>, and attend their events. Even if you aren't interested in grad school, check out research opportunities to pick up new skills and make connections with professors and graduate students. Sign up for Berkeley Connect – in Physics or another department!
- **Email Lists:** As job and internship opportunities come into the department, we disperse this information via email. Make sure you are on either our “intended majors” or “physics majors” email lists. Any of the Physics undergraduate advisors (located in 376, 374, 368 LeConte) can confirm your email is being included and add you if need be.
- **Board Postings:** Check the boards around LeConte (specifically those on the 3<sup>rd</sup> floor) for information about job and career related activities/resources.
- **LinkedIn:** See <https://www.linkedin.com/school/uc-berkeley/people/?facetFieldOfStudy=100892> for a list of UCB Physics students and alumni on LinkedIn.

### Related Departments on Campus

- **Email Lists:** Many of our related departments (Engineering, Computer Science, etc.) have regular email blasts that go out to their students. These emails contain program and career information that is likely relevant to you. If you'd like to be added to a particular departments email list, speak with one of the undergraduate advisors in 376, 374 or 368 LeConte.

## Career Center ([career.berkeley.edu](https://career.berkeley.edu))

The UCB Career Center will be one of your best resources as you begin your career planning and job search. It has the most comprehensive offering of career information and services available on campus.

- **Career Counseling:** You can make 15-minute and 30-minute appointments with a Career counselor. These appointments can be as broad or as focused as you need. There are several counselors who have specialties in the physical sciences. Book an appointment <https://career.berkeley.edu/Info/MakeAppt>.
- **Handshake:** Handshake is the Career Center's online portal. By signing up and accessing Handshake, you can connect with employers, find jobs and internships, and learn about on-campus recruiting opportunities. Sign up for Handshake here: <https://career.berkeley.edu/handshake>.
- **Career Mail:** Sign up through Handshake to receive information about STEM-specific upcoming events and workshops, as well as other STEM-related activities around campus.
- **Website:** The Career Center website is full of resources that can assist you in every stage of your career exploration. You can find video tutorials, planning tools and job listings. You can also search for resources based on your student status – Freshman/Sophomore, Junior/Senior, International, etc. Check out the Career Center website <https://career.berkeley.edu/Info/Students>.
- **Industry-Specific Events:** Throughout each semester, industry-specific events are held across campus. These events are a great way for you to get a better understanding of what jobs are available (and what jobs you find interesting!) in the field of Physics. A list of Physical Sciences events can be found <https://career.berkeley.edu/Engineering/EngrEvents>.
- **Workshops:** These workshops cover topics such as writing resumes and cover letters, job search strategies, interviewing techniques, and utilizing LinkedIn. Find a list of Career Center events online: <https://career.berkeley.edu/Info/Events>.
- **Career Fairs:** The Career Center hosts 10+ career fairs a semester. Some of these are industry-specific, but the majority are not. Even if you are not looking for a job in the near term, Career Fairs are an opportunity for you to learn about different kinds of jobs and practice talking to potential employers. The Career Fairs are listed here: <https://career.berkeley.edu/Fairs/Fairs>.

## Career Counseling Library ([uhs.berkeley.edu/career-library](https://uhs.berkeley.edu/career-library))

The University Health Services Career Counseling Library is a good place to visit early on in your career exploration. They have a large collection of books, files, and directories to help you find the career path that is right for you. To use the resources and speak with a counselor at the library, simply drop by. You can find the drop-in hours here: <https://uhs.berkeley.edu/career-library>.

## Off-Campus Career Resources

This section will introduce you to the resources available off campus, and online. Some of these sites are specific to Physics (in which case this guide will focus on their career resources); other sites have a broader career focus. We encourage you to do a cursory review all of these resources to find the ones that work best for you.

Most, if not all, of these sites have job listings, but we'd recommend that you primarily use these listings as a way to expand your current thinking of physics job titles. If you see a job of interest on one of these sites use Handshake, Google or LinkedIn to further investigate the job and company. Someone in your network may have a connection that you can leverage or that company may be recruiting on campus. It's far better to get your resume into the hands of a real person than to just upload it into a resume database.

### Physics.org ([physics.org/careers](https://physics.org/careers))

This website has a cool tool that enables you to click around and learn about REAL people with different kinds of physics jobs. Disclaimer: This site is based out of the UK, but it's a great place to get ideas about careers you might not have thought of as being in the "physics world."

>> **Best way to use this site:** Learn about different and unique physics-based jobs.

### AIP/American Institute of Physics ([aip.org/career-resources](https://aip.org/career-resources))

The AIP website is a wealth of information on everything Physics. Their Career Resources section has job listings, employment reports, career advice and career-related webinars. This site also has links to career resources in related fields: Astronomy, Acoustics, Physicists in Medicine, etc.

>> **Best way to use this site:** Read up on Physics employment trends and review job postings to see who's hiring and what kinds of jobs are available (write down the ones that sound interesting to you!).

### SPS/ Society of Physics Students ([spsnational.org/career-resources](https://spsnational.org/career-resources))

The SPS website has similar content to the AIP website. You'll find career and job advice, links to jobs and SPS event listings. SPS also has a list of "Physicist Profiles" that can give you more job titles to consider. One of the coolest features of the website is the Career Toolbox - <https://www.spsnational.org/careerstoobox> (a joint effort by AIP & SPS). The toolbox offers step-by-step advice as you advance through your career search.

>> **Best way to use this site:** Expand your knowledge of relevant jobs, and check out The Careers Toolbox.

### **APS/American Physical Society ([aps.org/careers](https://www.aps.org/careers))**

The APS website is again, similar to AIP and SPS. You can find career fair listings, job listings, employment statistical data, and advice. APS has its own Professional Guidebook (<https://www.aps.org/careers/guidance/development/index.cfm>) which is similar to the Careers Toolbox from SPS & AIP, but perhaps a bit more straightforward and with less frills.

>> **Best way to use this site:** Consider joining a local APS chapter (there is a Silicon Valley chapter) for networking and mentoring opportunities. Review the Professional Guidebook, paying special attention to the informational interviews section.

### **AAPT/American Association of Physics Teachers ([jobs.aapt.org/jobseekers/resources](https://jobs.aapt.org/jobseekers/resources))**

If you are considering a job as a physics teacher, this site has some great testimonials from undergraduates who have gone into the field. Like most of the other sites, it also has career advice, job listings and webinars. The AAPT site contains links to a TON of other resources, so this is a great place to start if you want to learn more about a career as a STEM teacher.

>> **Best way to use this site:** Browse resources and find out if teaching physics would be a good career fit for you.

### **LinkedIn ([university.linkedin.com](https://www.linkedin.com))**

LinkedIn will be an amazing networking tool for you to utilize throughout your career, starting now. It's become such a critical tool, that the UCB Career Center offers workshops about how to best leverage it during your job search. LinkedIn has a whole section for undergrads with resources on job hunting, building a profile and networking. NACE (National Association of Colleges and Employers) has produced a comprehensive guide to LinkedIn (as well as several other social media sites). You can access them here: [http://www.naceweb.org/knowledge/social-media/career-counselors-guide.aspx?terms=mentoring guide](http://www.naceweb.org/knowledge/social-media/career-counselors-guide.aspx?terms=mentoring%20guide).

>> **Best way to use this site:** Create an account; use the tutorials to create a compelling LinkedIn profile (something you'd be proud to include on your resume – chances are employers will be looking you up), and start growing your LinkedIn network now.

## [Dice.com \(insights.dice.com/career-toolkit\)](https://insights.dice.com/career-toolkit)

Dice.com is specifically for jobs in technology. You can find data on the most sought-after skills, what positions are least impacted, and find out how your skills measure up with other job seekers. There is also a career toolkit with sections on networking, job hunting and resume writing.

>> **Best way to use this site:** Do some research on tech fields that you find interesting. What skills are they looking for? Where do you match up? Use the toolkit to get tips from those already in the industry to help you get an edge in your job search.

## [Bureau of Labor Statistics \(BLS\) Occupational Outlook Handbook \(bls.gov.ooh\)](https://bls.gov.ooh)

There is a huge amount of information in the Occupational Outlook Handbook. You can search occupations by major, type of degree required, median pay, projected growth rate, etc. You can drill down into an occupation and research what a typical day is like, what the work environment is like, what skills you need, etc.

>> **Best way to use this site:** Again, there is a TON of data on this website, so it is easy to get overwhelmed. Use the Occupational Outlook Handbook as a way to get a good feel not only for what kinds of jobs appeal to you, but also what sort of work environments are a good fit. If you already know what kind of job you are looking for, use the handbook to find out what cities/states pay the most and are least impacted in that field.