

# Phys 7857 Graduate Seminar

## “How to get a job in physics”

Today: jobs at primarily teaching institutions

[www.haverford.edu/physics-astro/Amador/Job\\_Search\\_Liberal\\_Arts\\_Colleges.pdf](http://www.haverford.edu/physics-astro/Amador/Job_Search_Liberal_Arts_Colleges.pdf)

Today's guests:



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Ph.D 2000  
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Today we will focus on institutions where the primary role of the faculty member is teaching. This group of institutions is as diverse as the research institutions we discussed the previous lecture. It includes smaller state universities as well as colleges with graduate programs in a few areas.

It should be noted that even at these types of institutions, there are currently pressures for the faculty to do some level of research, and in particular, to attract external funding. The research is sometimes expected to have undergraduate involvement.

The mechanics of hiring sound similar to those at a research institution: there is an ad, people send in resumes, statements of research and teaching philosophy, and arrange three letters of recommendation. A search committee screens the applications.

However, since most physics departments at teaching institutions are small, search committees will usually involve physicists in areas quite different from the one of the applicant. It might even include scientists from areas other than physics. The application materials should be tailored appropriately: you will not be talking to physicists in your same subfield.

In teaching institutions it is more common to find ads that do not target a given subfield in physics.

In a research institution, your chances of being considered probably are higher if there are researchers in your sub-field of physics at the institution.

In a smaller institution, the effect can be the opposite: in order to keep balance between the areas of physics, the presence of someone in your sub-field can be a hindrance.

Given that hiring you will have a much larger impact on the institution, you should expect more scrutiny of you as an individual. In particular, the cover letter of the application, the statement of teaching philosophy and your research statement (in particular how you will manage to do research at a teaching institution and how will you involve undergraduate students) acquire much more importance.

In spite of this, fight off the desire of being verbose! Be brief and to the point. The search committee members will usually be scanning dozens if not hundreds of applications. And it will be composed of faculty with a smaller amount of discretionary time on their hands.

In preparing your resume, include more details than usual on your teaching experience. For instance “TA Physics 2101” is better phrased as “was in charge of recitations of two sections of 25 students in introductory mechanics, where I solved problems adapted from Resnick and Halliday and hand graded quizzes”

The statement of teaching philosophy should be carefully prepared, avoiding platitudes and/or statements that appear bizarre. It may have to address weaknesses (e.g. you are a theorist, how are you going to handle labs?). The best strategy is to try to relate to things you have actually done in the classroom and to be as concrete as possible.

Try to see if the department has novel initiatives in teaching. Several departments experiment with inquiry-based learning and proudly state so in their web pages and materials. If the department has a strongly defined teaching identity, if your statements fails to relate to it, it would almost surely disqualify your application.

Your research statement should address how will you manage to conduct research at an institution with a small department, without graduate students and where your teaching load is larger than at research institutions. Most funding agencies have special programs for research at undergraduate institutions. Investigate them well and incorporate them in your research statement. The Council for Undergraduate Research has many resources on funding and other things pertaining to research at a small institution <http://www.cur.org/>. For theorists, take a look at the Anacapa society <http://people.hws.edu/spector/anacapa/AnacapaMain.html>

In seeking for a job at teaching institutions it is good to repeat what we mentioned in the first lecture: a job is not a prize. Don't assume that because you did a hot piece of research in your Ph.D. you will immediately impress the search committee of a small institution. They are looking for a colleague for many years, not to reward someone's previous accomplishments.

In fact, it is reasonable to expect that you will have very significant problems attracting the attention of a search committee at a teaching institution when you just finished your Ph.D. or after your first post-doc. Most search committees will look for candidates with teaching experience that you just do not have.

To deal with this point there are two strategies: either try to acquire real teaching experience as a post-doc (this means being in charge of a course). Many postdoctoral advisors will accommodate a request to teach (not all). You also need to ponder if the time invested in this activity will not impact negatively on your research.

If your postdoc ended, you are out of a job, and are trying to move your career in the direction of a teaching institution, then a usual route is to get any teaching job you can get (normally as an instructor) and “move your way up the teaching ladder”. Start as an instructor “at will” (paid by the course), then try to get a more permanent instructorship then land a tenure track position at a less desirable teaching college and then try to move to a better teaching college.

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