



FIVE COLLEGES
INCORPORATED

APS Webinar: Physics Faculty Positions at the Colleges

(Predominantly Undergraduate Institutions – PUIs)

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May 2011



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Physics Jobs at the Colleges

Hundreds of 4-Yr. Colleges

(programs without graduate students)

Private liberal arts colleges

Public liberal arts colleges

large and small; rich and poor

(Not all colleges are called colleges)



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How they advertised this year:

Your best resource:

<http://www.aps.org>

<http://www.aps.org/careers/index.cfm>

<http://www.aps.org/careers/employment/index.cfm>

<http://www.aps.org/careers/employment/jobcenter.cfm>

<http://careers.aps.org/search.cfm>

<http://careers.aps.org/jobs>

How they advertised this year:

The Smith College Physics Department invites applications for a tenure-track position in physics at the Assistant Professor level, starting 2011. The candidate should have a Ph.D., a commitment to undergraduate teaching, and a strong research program accessible to undergraduates. Significant equipment start-up funds, student summer research stipends, and a newly renovated research lab space are available to aid in establishing a research program. For details and to apply, submit an applications online at <http://jobs.smith.edu> (September 2010, *Physics Today*)

Lewis & Clark College invites applications for a tenure-track assistant professorship beginning Fall 2011. Potential for excellent teaching and research at an undergraduate institution are essential. Preferred research fields included, but are not limited to, experimental condensed matter physics, or atomic, molecular, and optical physics. Postdoctoral experience required. To apply see <http://...> (September 2010, *Physics Today*)

How they advertised this year:

The Denison University Department of Physics and Astronomy invites applications for a tenure track assistant professor preferably starting Fall 2011, although a later start may be considered under exceptional circumstances. Ph.D. required. We are seeking candidates with outstanding potential as teachers of physics at both the beginning and advanced levels, including laboratory-based courses. The successful applicant is expected to carry out a professional research program with the involvement of undergraduates. Substantial start-up funds for research will be available, and Denison supports generous professional and family leave programs. Denison University is a highly-selective liberal arts college of 2100 students, located in Granville, Ohio, 30 minutes from Columbus. The department consists of seven faculty, a technical assistant, and an administrative assistant. Facilities include excellent equipment for both teaching and research, first class on-site experimental labs, a link to the Ohio Supercomputer, an observatory, a planetarium and a well-equipped machine shop. Applicants should submit vita, transcripts, a description of teaching interests and experience, a proposed research plan including the means of involving undergraduates ...(September 2010, *Physics Today*)



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Key features of these jobs

Rewarding teaching

Research opportunities

Service (advising, committees)

Key features of these jobs

Teaching

Physics majors, non-majors

Maybe interdisciplinary courses

Small classes, perhaps larger intros

Lots of laboratory teaching

2 – 4 courses per semester

Key features of these jobs

Research

Involving undergraduates

and, occasionally, postdocs on grants

Start-up funding: \$40-\$120K; lab space

Choose scope & timetable for progress

Grant opportunities: NSF-RUI,

NSF-REU, Research Corporation, ...



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Key features of these jobs

Service

Advising majors and non-majors

Departmental leadership

Department & campus committees

Lots of laboratory work



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Why these jobs are exciting!

Independence

**Working closely with student
collaborators**

Opportunity for innovation

**Breadth and renewal from liberal
education**

Expectations for Success

Very effective teaching – engaging students in their learning

Effective laboratory instruction

Engaging students in research

Productive research, seeking grants

Effective advising of students

Departmental and College service

Applicant Screening Criteria

Ph.D.

Postdoctoral experience (?)

Prior effective teaching

Teaching statement, interest in teaching

Sustainable, productive research plan

that will involve undergraduates

Relevant letters of recommendation

How to Prepare

Get teaching experience, beyond T.A.

Learn and apply science pedagogy

Develop a teaching philosophy

**Choose a research program of
sustainable scope, accessible projects**

Visit some colleges to give research talks

Adjust your language

How to apply

Do study the job ad carefully.

Do look carefully for other descriptions of the job: compare the ad in *Physics Today* with the listing on the APS jobs website and any listing on the campus websites (Human Resources jobs list, Dean of Faculty's list of open positions, the department's job description).

How (not) to apply

Don't recycle your R1 letter of application.

Do explore the college's web site and the department's web site – look for curricular information, research productivity, teaching and research grants, student career paths.

Do learn the campus terminology.

Don't request the R1 reference letters.



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How (not) to apply – contd.

Do create a thoughtful letter of interest.

Do prepare a statement of teaching philosophy and teaching interests.

Do prepare a research plan: getting started, building for the future, identifying projects for students and potential funding sources.

Do be committed to access and diversity.

Interviews at Conferences

What are the opportunities? Physics meetings often are off-cycle with job recruiting schedules

Do prepare short statements of your interests in teaching and research.

Do listen carefully to questions, answer succinctly; offer to elaborate, wait for guidance from the interviewers.

How to Interview on Campus

Understand your audiences: physics faculty colleagues, non-physics faculty colleagues, students, academic administrators.

Remember it is unlikely that you will have one, if any, specialists in your research subfield.

**Prepare for the questions they will ask.
What can you say to non specialists?**

How (not) to Interview

Do make your research interesting, make it clear what the intellectual excitement is, why students should work with you.

Prepare your “talk” to be interesting and engaging, not just research PowerPoint.

Be interested in courses and labs.

Be interested in students and career paths.

Explore research facilities, grant-seeking support, student stipend options, start-up.

How (not) to Negotiate

Do wait until you have an offer.

Do make clear equipment and supplies needs – negotiate on start-up support.

Do discuss initial summer stipends for you and students working with you.

Do be clear on needs for teaching courses and labs.

Note: Salary may or may not be negotiable.

Ask about Moving Expense reimbursement.

Ask about help for a partner or spouse.

After You Get the Job

APS/AAPT/AAS New Faculty Workshop.

**APS Resources for Undergraduate Physics
Faculty Members --**

see: www.aps.org/programs/education/undergrad/faculty/

Plan your courses, rehearse teaching labs.

Get your local research (lab) started.

Use students as you get started.

Other Resources

Council on Undergraduate Research (CUR)

www.cur.org

How-To series of booklets

get started in research

get a tenure-track position

mentor undergraduate researchers

develop an institutional

undergraduate research program

Other Resources

CUR White paper on jobs at the colleges.

NRC Handbook: *Science Teaching Reconsidered* (NAP)

NRC Report: *How People Learn* (NAP)

***Distinctively American: The Residential Liberal Arts Colleges* (Koblik & Graubard)**



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QUESTIONS?

Contact me:

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