For graduate students and Postdoctoral Fellows at the Johns Hopkins Medical Institutions

A Mentored Undergraduate Teaching Experience

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Creating Teaching Opportunities for Postdocs
2014 National Postdoctoral Association Annual Meeting

Sunday, April 6, 2014
Johns Hopkins Medical Institutions

- Include the School of Medicine, the School of Public Health and the School of Nursing at the Johns Hopkins East Baltimore Campus
- Excel in research training
  - Little or no instruction in how to teach

- Track-record of Academic careers
  - Employers expect teaching skills beyond the Teaching Assistant experience
  - Developing the statement of Teaching Philosophy
History

• Instructional Associate program - 2010
  Joint program endeavor between the Johns Hopkins Professional Development Office, JH Postdoctoral Association and Notre Dame of Maryland University

• Only involved the School of Medicine
  3 postdoctoral fellows were selected for the Spring session

• Teaching first-year Biology for science majors
Teacher Training for Those Who Can

Hopkins launches a pilot program for postdocs who want to learn to teach

May 2011--When he completes his postdoctoral fellowship at Johns Hopkins, Christopher Berndsen hopes to obtain a faculty position that gives him a chance to teach as well as do research. But when Berndsen began contemplating his job prospects last year, he was stumped by one thing. How does one teach?

Berndsen has a Ph.D. in biomolecular chemistry, has published eight papers in topflight scientific journals and knows the detailed biochemistry of the enzyme Ubc13, the subject of his current research. Teaching, however, he says, presents unique challenges.

Fortunately postdocs like Berndsen now have some assistance. The Johns Hopkins Medical Institutions Professional Development Office (PDO), in collaboration with the College of Notre Dame, in Baltimore, recently launched an Instructional Assistants (IA) program, designed to help train postdocs in the craft of teaching. Berndsen is one of the first IAs.

The program grew out of requests from postdocs, says PDO Director Donna Vogel. Some, she says, seek faculty positions at liberal arts colleges, where teaching can constitute at least half of a faculty member’s time. However, even those seeking positions at research universities will inevitably have to teach. Vogel says, as will many others in the Office of Undergraduate Education.
Expansion

- 2011: Towson University
- 2012: Loyola University Maryland
A la carte

• Growing program
  • Selection of the teaching fellows based on their teaching interest in an undergraduate institution
  • Each program differs in time, intensity and commitment
  • The program is now accepting 3rd-year graduate students
  • Now includes the School of Medicine, the School of Public Health and the School of Nursing
Selection

• **Criteria**
  • Previous mentoring, teaching experiences, tutoring
  • Personal statement in 120 words
    • Career goals (are they credible and personal?)
    • Motivation for participating in program
    • Insight into effective teaching (are the ideas practical and original?)
    • Learning from previous teaching experience, if any (is the learning constructive, useful, insightful?)
Notre Dame of Maryland University Teaching

- One-semester program
- BIO111: Fundamentals of Biology taken by students with a high interest in Biology, chemistry and math since High School (MSAT) or BIO110 C+
- Topics and reasons for difficulty in understanding
Notre Dame of Maryland University Teaching

- Observe BIO111 lecture
- Develop own session:
  - pre-session assessments with 5 questions
  - Interactive instructional component
  - Post-assessment question with 5 questions
- Close mentoring before and after the session
Notre Dame of Maryland University Teaching

- Continuing mentoring with one-time session on pre-defined topics
  - Writing the teaching Philosophy
  - Developing a syllabus
  - Letter of recommendation

Advantages
- Lesser time commitment
- Extensive feedback and improvement
- Not an adjunct position
Notre Dame of Maryland University Teaching

• “I thought it was the perfect level of targeted, mentored teaching experience. It gave me enough feedback to reflect and apply to my future teaching experiences.”
• “It was a great experience and Dr. Bonner provided the help I needed during the class prep as well as valuable feedback after each session.”
• “I was able to appreciate the value of reflective learning practices and engaging students in learning activities rather than simply lecturing.”
• “It was a good introduction to teaching for me. I then was able to be a guest lecturer for a couple of classes in Dr. Bonner's class the following semester and a friend's class at Towson University. These were good preps for teaching a full semester. The teaching fellowship taught me the importance of pairing lectures with activities so that the students can have a more hands-on approach to learning.”
Towson University

- Three-semester program
- Allows 3\textsuperscript{rd}-year graduate students or Master-level
- First semester
  - Paired with a master teacher and observe lecture
  - Pedagogy sessions open to all selected candidates that were not offered a position
Towson University

- Learning Modern Pedagogy

http://www.educatorstechnology.com/2013/04/the-modern-taxonomy-wheel.html
Towson University

- First semester
  - Modern Pedagogy: College Science Teaching Seminars (Fall)
    - The science of learning and the learning of science: Key concepts and strategies for teaching
    - How to make lectures effective: Using problem solving, case study, dilemmas, problem sets, and discussions to facilitate student learning
    - Evaluating student learning (and your teaching): An introduction to classroom assessment
    - Marketing your teaching experiences: Formulating a teaching philosophy to make your job application stand out
    - Establishing a productive classroom atmosphere: Classroom management and elements of a good syllabus
Towson University

• Second Semester
  • Lecture only: 3 hours teaching/week
  • Courses offered:
    • Biology 120, Principles of Biology
    • Biology 221, Human Anatomy and Physiology I
    • Biology 190, Introductory Biology for the Health Professions
    • Chemistry 132, General Chemistry I

• Third Semester
  • Lecture and lab (additional 2 hours/week)
Towson University

• “Dr. Ghent and Dr. Nare were incredibly helpful to me in all aspects of the program. They allowed me to observe their classes and gave me material when I was struggling. I got some helpful feedback after Dr. Nare observed my classes and I also found it comforting to debrief with the other fellows.”

• I had access to lectures prepared by other instructors at Towson but chose to create my own from scratch to make them more "my style." I did not get formal feedback from other professors but when one professor observed my class for research purposes I asked for some additional feedback.”

• “I am currently teaching my first class, and loving it. I could not have truly understood the commitment and process without actually going through it.”
Loyola University of Maryland

- Three-semester program
- Allows 3rd-year graduate students or Master-level
- First Semester
  - Pre-semester: Teaching Workshop (August)
    - Teaching Pedagogy
    - Meeting with Program and Lab coordinators
  - Semester 1 (September – December)
    - Observe BL 118 lecture, Intro to Cell and Molecular Biology + additional 1-2 lectures
    - Teaching using well-supported laboratory courses BL 119, Intro to Cell and Molecular Biology Lab
Loyola University of Maryland

• Second Semester
  • Pre-semester: Teaching Workshop (January)
    • Pedagogy of curriculum, teaching philosophy
    • Meeting with program and lab coordinators
  • Semester 2 (January – May)
    • Observe lecture in BL 121, Organismal Biology + additional 1-2 lectures
    • Teaching well-supported laboratory courses BL 126, Organismal Biology Lab

• Third Semester
  • Pre-semester: Teaching Workshop (September)
    • Job searches, cover letters, interviews
    • Fellows prepare short presentations on teaching topics
    • Course preparation
Loyola University of Maryland

• Third Semester
  • Semester 3 (September – September)
    • Co-teaching with a Master Teacher lectures on Intro to Cell and Molecular Biology
    • Team-teach with another Teaching fellow
    • Teach solo in a non-major lecture
      • Modern Marvels of Biotechnology, Intro Anatomy and Physiology, or Human Biology)
    • Bi-weekly meeting with Program Coordinator
Loyola University of Maryland

• “We were given powerpoints (sic) and exams for the lab but were **encouraged to alter questions** as necessary. This allowed us to cater it to what we were teaching. We were observed a few times during the semester and participated in a few **pedagogy development lessons** with our mentor.”

• “**Thoroughly enjoyed the experience.** The faculty in the department were **extremely welcoming and offered help whenever I needed it.**”

• “**Fostered independent teaching** while allowing one-on-one interaction with students”
Successes? YES!

- Notre Dame of Maryland University
  - Since 2010, 19 teaching fellows went through the program
  - 4 are now in Assistant Professor positions in undergraduate institutions
  - 2 are employed by companies
    - All these were involved between 2010-2012
  - 13 are still training at Hopkins

- Towson University
  - Of 14, one is currently affiliate faculty (2011) and one is still teaching since 2012
  - 4 fellows are currently teaching (2013)

- Loyola University Maryland
  - 2012-2013 roster: had 2 teaching fellows: one is an affiliate faculty with Loyola, one became visiting Assistant Professor of Biology in another PUI
  - 4 fellows are still finishing the program
Let the Teaching Fellows Speak

• Incredible for jump starting a career in undergraduate education [...] providing the guidance, preparation, and mentoring [...] I am more confident [...] I will be competitive

• “Real" teaching experience as a lecturer [...] boosts your teaching skills [...] opens a door to future permanent teaching positions

• Extremely helpful experience [...] important first step towards becoming a professor at a PUI for me [...] has shaped the way I approach teaching [...] I am a better teacher [...] value of active learning techniques

• Instrumental in my finding a job at a PUI. Many schools addressed my experience in the program [...] and were enthusiastic [...] 

• Actual hands-on experience I was looking for. I was able to make the class my own without having to start each course from scratch, which is very important for a busy graduate student to have.
Professional Development Office

• Director: Donna L. Vogel, M.D., Ph.D.

• Assistant Director: Gaëlle Kolb, Ph.D.

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