

BTNY 590 Preparing for Post-PhD Careers (PREP)

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Th 10:30 – 11:45 **online**
1 credit

Course Description

This course is a 1 credit weekly seminar designed to introduce students to a variety of career paths available to researchers with a PhD in a bio or bio-related science. Each week will feature a speaker from a different sector of basic and translational biology, including academia, industry, biotechnology law, scientific policy and science communication. Most speakers have a PhD in plant biology or pathology, but the information is relevant across fields. Speakers include those who have recently entered their positions and senior leaders in their fields. As part of their talk, speakers will discuss their day to day activities, the best and worst aspects of their jobs, work-life balance, and their career paths. Students will have the opportunity to ask speakers questions during class. If you have ever wondered ‘what will I do after grad school?’ or ‘how do I find the right job for me?’ this course is for you.

All speakers will be live via Zoom:

<https://purdue-edu.zoom.us/j/95274307823?pwd=fWg581xWIC3QgpMOM4TmYazXOBW9o4.1>

Course objectives and goals:

1. To introduce graduate students to the diversity of careers available for those with a PhD in a scientific research-intensive field, and to show them the variety of ways scientists have achieved these careers.
2. To facilitate student networking abilities by introducing them to established scientists in a classroom setting.

Required Prerequisites

Graduate student or postdoc

Learning Resources, Technology and Texts

Brightspace: You can access the course via Brightspace. As long as the speaker agrees, I will record the Zoom class and post it in Brightspace.

Grades will be communicated through Brightspace.

Course Assignments and Requirements

Come, listen, and ask questions.

1. 80% Attendance: **Come and keep your camera on (off = not present)**
2. 20% Participation: Ask questions (one question is required to get full credit)

Grading scale

Each class is worth 10 points. Eight points for attending and keeping your camera on, 2 for asking at least one question. **Speakers take time from work to come – please be respectful of them and keep your cameras on, act interested, and ask questions.**

A = 90% and above

B = 80% and above

C = 70% and above

D = 60% and above

Policies

I. General Course Policies

1) My office hours are by appointment. You can always email me with questions and I will typically get back to you within 48 hours M – F.

II. Missed or Late Work

a. Academic Guidance in the Event a Student is Quarantined/Isolated

If you become quarantined or isolated at any point in time during the semester, in addition to support from the Protect Purdue Health Center, you will also have access to an Academic Case Manager who can provide you academic support during this time. Your Academic Case Manager can be reached at acmq@purdue.edu and will provide you with general guidelines/resources around communicating with your instructors, be available for academic support, and offer suggestions for how to be successful when learning remotely. Importantly, if you find yourself too sick to progress in the course, notify your academic case manager and notify me via email or Brightspace. We will make arrangements based on your particular situation. The Office of the Dean of Students (odos@purdue.edu) is also available to support you should this situation occur.

b. Classes missed for non-Covid related reasons

Since grades are based on Zoom attendance and participation, you must tell me *before* class if you are unable to attend. Classes that are missed due to illness, grief absence, family emergency, religious observance, or university sponsored activity will be given an absence without penalty. For most other cases, your grade will be marked down 5% for each absence.

III. Grief Absence Policy for Students

Students will be excused for grief leave and will be able to make up missed assignments or tests.

IV. Students with Disabilities

Purdue University is required to respond to the needs of students with disabilities as outlined in both the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 through the provision of auxiliary aids and services that allow a student with a disability to fully access and participate in the programs, services, and activities at Purdue University.

If you have a disability that requires special academic accommodation, please make an appointment to speak with me within the first three (3) weeks of the semester in order to discuss any adjustments. It is important that we talk about this at the beginning of the semester. It is the student's responsibility to notify the Disability Resource Center (<http://www.purdue.edu/drc>) of an impairment/condition that may require accommodations and/or classroom or video conferencing modifications.

V. Academic Dishonesty

Purdue absolutely prohibits cheating or academic dishonesty of any kind: For more information, please refer to Purdue's student guide for academic integrity: <http://www.purdue.edu/odos/aboutodos/academicintegrity.php>

VI. Emergencies

Purdue's policy on such events:

In the event of a major campus emergency – COVID-19, weather related or otherwise – course requirements, deadlines, and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Relevant changes to this course will be posted onto the course Brightspace or can be obtained by contacting the instructor via email or phone. You are expected to read your @purdue.edu email on a frequent basis.

VII. Non-discrimination statement

Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. More details are available on our course Brightspace table of contents, under University Policies.

VIII. Mental Health Statement

If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try [WellTrack](#). Sign in and find information and tools at your fingertips, available to you at any time.

If you need support and information about options and resources, please contact or see the [Office of the Dean of Students](#). Call 765-494-1747. Hours of operation are M-F, 8 am- 5 pm.

If you find yourself struggling to find a healthy balance between academics, social life, stress, etc. sign up for free one-on-one virtual or in-person sessions with a [Purdue Wellness Coach at RecWell](#). Student coaches can help you navigate through barriers and challenges toward your goals throughout the semester. Sign up is completely free and can be done on BoilerConnect. If you have any questions, please contact Purdue Wellness at evans240@purdue.edu.

If you're struggling and need mental health services: Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help, such individuals should contact [Counseling and Psychological Services \(CAPS\)](#) at 765-494-6995 during and after hours, on weekends and holidays, or by going to the CAPS office of the second floor of the Purdue University Student Health Center (PUSH) during business hours.

IX. Course Schedule

Note: There are a lot of other possibilities that aren't discussed here! High school science teacher, lab manager, working at an international ag center (CG center), working in a non-profit like The Nature Conservancy, managing gardens for a major corporation. There isn't time for all of those, but if you want to network with anyone in these careers let me know and I will try to find someone you can talk with.

Part 1: Research and Teaching Careers in Academics or Industry

Aug 22: Introduction to the course and Research and teaching at an R1: Dr. Anjali Iyer-Pascuzzi, Purdue.

About: The 'traditional' and linear path from Ph.D. -> Postdoc -> Faculty

Aug 29: Research/Teaching at a primarily undergraduate state institution: Dr. Jose Pablo Dundore-Arias, Cal State University Monterey Bay

About: CSU Monterey Bay is a minority serving institution in the Cal State system, which offers bachelor's and master's degrees and serves a large commuter population. Dr. Dundore-Arias has taken on research and teaching as well as extension for Central Valley Californians. <https://dundoreariaslab.weebly.com/>

Sept 5: No class, Anjali out of town

Sept 12: Research in an Industry Start-up: Dr. Natalie Breakfield, Vice President of Research and Discovery, New Leaf Symbiotics.

About: New Leaf Symbiotics is a start-up company in St. Louis, and Dr. Breakfield has been with them from almost the start. Great information about the differences between start-ups and Big Ag companies like Bayer.

Sept 19: Research at a PUI: Dr. Benjamin Spears, Assistant Professor of Biology, Butler University.

About: Dr. Spears earned his PhD in plant stress biology from the University of Missouri. He has been an Assistant Professor at Butler since Fall 2020 where his lab works on host-microbe interactions. He has good insight into how to find a job at a PUI after doing a traditional research-based postdoc, and in the 'two-body' problem.

Sept 26: Research in Industry: Dr. Kaitlyn Courville, Bayer.

About: Dr. Courville is a molecular plant pathology scientist II at Bayer and a graduate of the University of Dusseldorf, Germany. She is a great resource for understanding what it's like to work in a 'big ag' company or other large research-based corporation.

Part 2: I'm not sure I want to do research in an academic or industry setting. What else can I do with my PhD?

Oct 3: Research program director: Dr. Kay Kobak, Associate Director of Engineering Undergraduate Research at Purdue.

About: Dr. Kobak graduated from Stanford University's genetics program and wanted to do something other than research. Hear how she found her dream job and life at Purdue.

Oct 10: Patent Lawyer: Dr. Erica Fishel, <https://www.ericafishel.com/>.

About: Dr. Fishel earned her Ph.D. in plant biology at Washington University and subsequently went to law school. She's now a lawyer who specializes in intellectual property in molecular biology and biochemistry.

Oct 17: (out of order!) Lecturer - Teaching (no research) at an R1 research institution: Dr. Rucha Karve, Purdue Dept. of Biology and Ivy Tech

About: Dr. Karve is a lecturer in the Biology department and also taught at Ivy Tech in Lafayette. She has a winding path through research and teaching that led her to a position she enjoys. Hear about what an exclusively teaching position at a research-based university is like.

Oct. 24: Research in a government lab: Dr. Matt Helm, USDA-Agricultural Research Service (ARS), Purdue.

About: Dr. Helm earned his PhD in plant-microbe interactions at IU Bloomington and has been at the USDA since 2019. Research in a government lab has some distinctions from research in academia or industry and some differences in recruitment that are useful to know.

Oct. 31. Technology Commercialization: Dr. Raquel Peron, Director of Business Development, Purdue Research Foundation can do any day in Oct

About: Dr. Peron earned her PhD in plant biology at Purdue. She has great information about a relatively unknown aspect of science and things you can do now to understand whether tech commercialization is right for you.

Nov. 7: No Class, Anjali on grant panel

Plant Science Policy and Communication

Nov. 14: Writing and Scientific communication: Dr. Nancy Hofmann, Plant Editors and senior editor at The Plant Cell

About: Dr. Hofmann started Plant Editors, a science editing service for manuscripts and grants. She is also a senior editor at The Plant Cell. If you are interested in science writing or editing, she is a great person to talk with.

Nov. 21: Communication building in Industry: Dr. Kathy Munkvold, Scientific Program Director, Foundation for Food and Agriculture Research (FFAR).

About: Dr. Munkvold earned her Ph.D. in plant pathology and subsequently worked in policy at the American Society for Plant Biology. She moved on to a career in industry and now leads the development of FFAR programs in the Cultivating Thriving Production Systems Priority Area.

Nov 28: Thanksgiving, no class

Dec 5: Industry biotechnology regulation: Dr. Miguel Vega-Sanchez, Head of Regulatory Affairs, Bayer

About: Dr. Vega-Sanchez is a team leader at Bayer, and focuses on all the small details for how to regulate and commercialize products.