Teaching as a Postdoctoral Scholar

RUTGERS–NEW BRUNSWICK
Institute for Teaching, Innovation, and Inclusive Pedagogy

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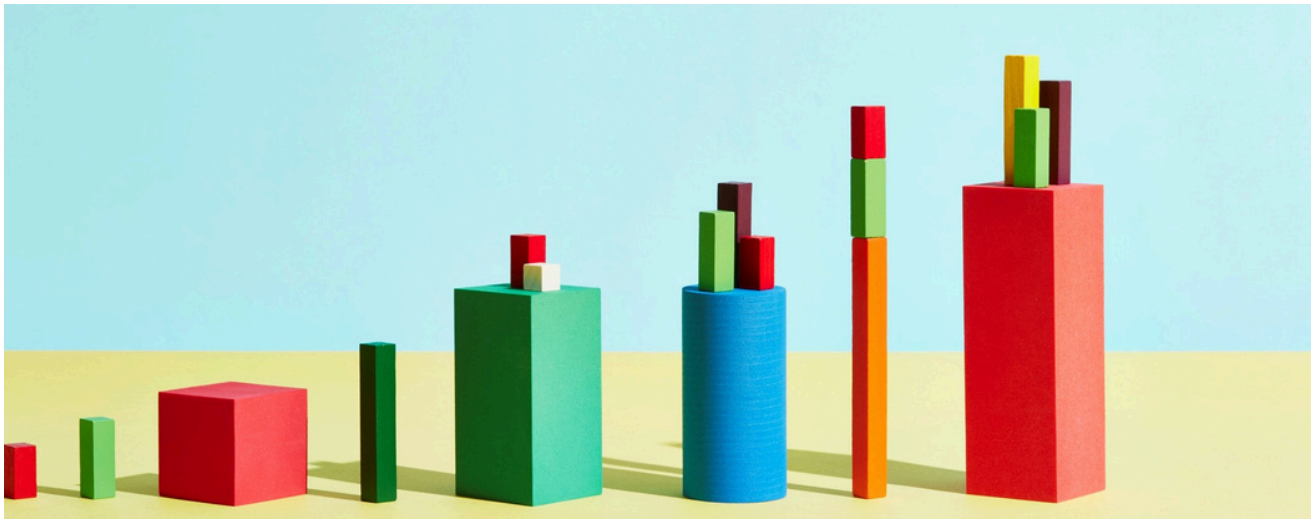
Introduction

The postdoctoral period is a pivotal stage in your academic career. It is a time of intensive research training, professional growth, and preparation for the next stage of your career. For many postdoctoral scholars (postdocs), that preparation likely involves some aspects of teaching, whether in a faculty position in a university setting or in an industry position that requires mentoring and communication skills.

Yet teaching development can be challenging to pursue during the postdoc years. It is often regarded as something to pursue if time allows, rather than as a deliberate part of professional development. It is important to note, however, that postdocs who engage in teaching development as part of their fellowships show no significant differences in publication rates or research productivity compared to those who do not; in some cases, postdocs who engaged in a structured teaching development program have shown to secure faculty positions at a greater rate than those in a national sample (Rybarczyk et al., 2011).

In general, teaching development has often shown to lead to positive outcomes such as finding a community of peer support, gaining increased teaching confidence and self-efficacy, and developing an awareness in evidence-based pedagogy (Haley et al., 2018; McAlpine et al., 2017; Nowell et al., 2018). Teaching experience, in other words, does not cost you your research career. Rather, it enriches it.

This guide is designed to help you navigate the landscape of identifying and building teaching experiences during your postdoctoral period. It covers how to align teaching opportunities with your career goals, how to manage competing responsibilities, where to find teaching experiences, how to recognize the teaching you are already doing, and how to document your growth as an educator. Read on to learn more about practical tips and strategies you can adapt and apply to your own context.



Determining Pathways Based on Your Career Goals

Before seeking out teaching opportunities, it is worth pausing to reflect on your career goals. The type and amount of teaching experience you need will look different depending on your goals. Additionally, the Office of Postdoctoral Advancement (OPA) is available to help you reflect on and define your goals through one-on-one career conversations and the Proactive, Reflection, Empowered, Planning (PREP) Career Program.

Reflect on your desired career path

- **Research-focused academic roles:** If you are aiming for a research-focused position at a college or university (e.g., research faculty or researcher at an R1 university), building your research portfolio will be a priority but you will also be expected to demonstrate teaching or mentoring competence. In this case, a thoughtful portfolio of teaching and mentoring experience (e.g., giving guest lectures, teaching short summer/winter courses as an instructor of record, mentoring research assistants, etc.) can strengthen your application.

- **Teaching-focused academic roles**: If you are aiming for a teaching-focused position at a college or university (e.g., teaching faculty), consider pursuing more substantial and varied teaching experiences (e.g., giving guest lectures, teaching full courses as an instructor of record, mentoring students, building experiences in curriculum design, doing community-engaged teaching, etc.). Articulate your teaching philosophy and your approach to student learning, and document various evidence of teaching and reflections on your teaching.

- **Academic roles with a balance of teaching and research:** If you are aiming for a position that places roughly equal emphasis on both teaching and research (e.g., faculty at a liberal arts college), you will need to demonstrate genuine competence and commitment in both areas. In this case, aim to build a portfolio that reflects meaningful depth on each side (e.g., teaching full courses as an instructor of record across different course levels, mentoring undergraduate or graduate students, maintaining an active research agenda, etc.).

- **Industry and non-academic roles:** Many careers outside of academia (e.g., industry, government, nonprofit organizations, etc.) involve training, mentoring, and effective communication in general. Skills developed through teaching can transfer directly to these contexts. If this is your path, focus on the transferable competencies, such as clear communication, designing learning experiences, giving effective feedback, and guiding others through complex material.

Utilize an Individual Development Plan (IDP)

One of the tools that are readily available for intentional career planning is the Individual Development Plan (IDP), often endorsed by major funding agencies such as the National Institutes of Health and the National Science Foundation. An IDP helps you express your career goals, identify skill gaps, and map out concrete steps for development, including teaching development.

We encourage you to approach the IDP as a living document rather than a bureaucratic checkbox. Use it to articulate your teaching goals alongside your research milestones, and bring it into conversation with your PI or supervisor. The Office of Postdoctoral Advancement (OPA) offers a Rutgers-specific IDP form as well as workshops and one-on-one consultation opportunities. Please visit "Goal Setting Resources" where you can download IDP templates, a guide on using S.M.A.R.T. goals, and the Mosaic of Mentors map. To set up an appointment with OPA, contact the office at opa@oq.rutgers.edu.

Managing Multiple Responsibilities

One of the most common concerns postdocs raise about pursuing teaching is time. Unless you are a teaching postdoc, your primary obligation is to your research, and adding teaching responsibilities can feel risky both professionally and personally. With intentional planning, it is possible to pursue meaningful teaching development without derailing your research.

Set clear, achievable goals

Rather than approaching teaching development as an open-ended aspiration, treat it like any other professional goal: Define it and give it a timeline. Ask yourself:

- What specific teaching skills do I want to develop this year?
- What experiences will help me build those skills?
- What is the minimum level of teaching engagement I need to credibly represent my development in a job application?

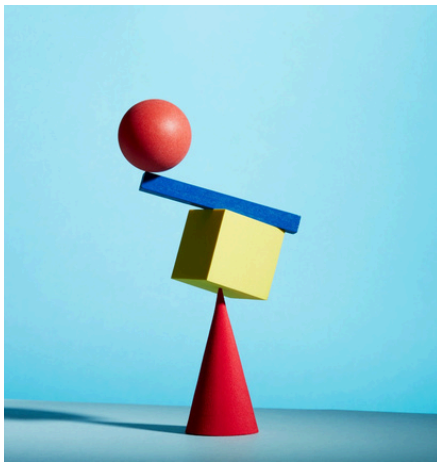
Setting clear goals also helps you have more productive conversations with your PI. Instead of a vague request to "do some teaching," you can propose something concrete: e.g., "I'd like to guest lecture in an introductory course once this semester" or "I am planning to mentor undergraduate students by _____."

Develop a plan to balance your research, teaching, and mentoring responsibilities

Research on postdoctoral professional development consistently highlights that time is the central constraint (McAlpine et al., 2017). Many postdocs find that development opportunities, including teaching workshops and courses, are either unknown to them or feel inaccessible given competing demands. Proactive planning is key.

Timing of teaching

If you are considering taking on a teaching opportunity, map out in advance when teaching preparation time would realistically fit into your weekly schedule. Compare this to your current research commitments to see whether the addition feels manageable.



For example, in a typical postdoc position, it might be best to reserve the first semester for settling into your new research environment. Similarly, you would probably need to spend the final semester focusing on career planning, preparing job application materials, and networking for future opportunities.

This makes the second or third semester the most strategic window for gaining teaching experience. By this point, you have likely found your footing in the postdoc role and have a clearer sense of your research trajectory, which means teaching is less likely to disrupt your core responsibilities. You are far enough into your position to manage your time effectively and anticipate the demands of your research schedule, yet still early enough that any temporary dip in research output can be recovered before you enter the job market. Additionally, teaching experience gained in the middle of your postdoc gives you adequate time to reflect on and articulate that experience in job applications and interviews.

Discussion with your PI

Before agreeing to a teaching role, discuss expectations with your PI or research team. Present a detailed plan for how you manage your responsibilities (e.g., research, lab work, etc.) and explain why you want to teach and how your teaching will support your overall career goals. Clarifying how teaching responsibilities would fit alongside your research can help prevent misunderstandings later.

Tracking your teaching hours

Be realistic about how long course preparation takes, especially if you are teaching a new topic for the first time. There is no single standard for how long it should take to develop a new lecture session, but it would be a good idea to keep track of the time spent on all of the projects you have committed to and make adjustments to your time allocation as needed. Start by creating a simple list of projects in an excel spreadsheet (or use a template you might find online, such as this time tracking template from Michelle Phelps's website).

Assessing and adjusting your commitment

If you decide to take on a teaching opportunity, periodically reflect on how it affects your research productivity and overall workload. If the balance becomes unsustainable, consider adjusting the scope of your teaching. It is better to take on a limited role thoughtfully than to overcommit.

If you take on a mentoring relationship, apply the same time-awareness you would to a teaching role. Estimate how often you will meet with your mentee, how much preparation or follow-up each interaction requires, and how that fits within your existing research and other commitments. Like teaching preparation, mentoring can expand beyond initial expectations, so check in periodically to assess whether the time investment remains sustainable and adjust the frequency or scope of your meetings if needed.

Be strategic about what you teach

If given the opportunity, you might consider teaching an upper-level course that is closely aligned with your research specialization. This approach would allow you to deepen your own understanding of your work by translating complex ideas into clearer, more accessible explanations, a skill that will also sharpen how you communicate your research in talks, interviews, and grant proposals. Teaching what you already know also reduces the preparation burden, making it easier to balance with your research commitments.

Alternatively, you might consider teaching a lower-level, general education course in your broader discipline. While this might feel further from your immediate research focus, these courses are often staples at most colleges and universities, meaning that your teaching experience signals to hiring committees that you are a versatile instructor capable of contributing to a department's core teaching needs, rather than just specialized offerings. Such a transferable teaching experience can be particularly valuable if you are applying to teaching-focused positions.

Ideally, if your postdoc timeline allows for more than one teaching opportunity, combining both approaches, one research-aligned course and one general education course, would give you the most well-rounded teaching portfolio heading into the job market.

Start with low-commitment options

You do not need to teach a full course to develop meaningful teaching experience. In fact, starting with smaller commitments, such as guest lecturing or teaching a short summer session, is often smarter. It lets you test your interest, build skills gradually, and demonstrate responsibility without overextending yourself. Think of your teaching development as a ladder: Begin on the lower rungs and move up as your capacity and confidence grow.

Finding Teaching Opportunities

Identifying actual teaching opportunities requires initiative, strategy, and sometimes a bit of diplomacy. Here are potential avenues to explore.

Start with a conversation with your PI

If your primary responsibility as a postdoc is research, we recommend that you first have a conversation with your PI or supervisor. Your PI might have differing views on your plan for teaching, and it is important to approach that conversation thoughtfully.

If you are aiming for a faculty position where teaching will be central, having a PI who is aware of your goals can be valuable as they are often well-positioned to mentor and advocate for you. Framing your request in the context of professional development, rather than as a distraction from research, can be more effective.

Acknowledge your commitment to your research responsibilities. Make clear that you understand your first obligation is to your research and that you are not asking to de-prioritize your postdoctoral work. Come prepared with a specific, low-impact proposal, such as a single guest

lecture or co-teaching, rather than an open-ended ask.

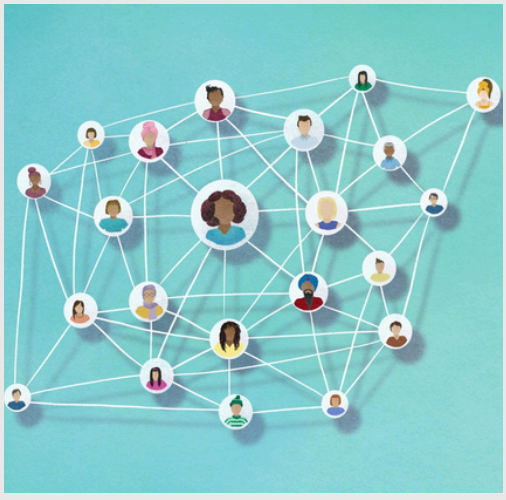
Also ask about guest lecturing opportunities. Many PIs teach undergraduate- and graduate-level courses and might welcome a guest lecture from their postdocs, especially on a topic closely related to the postdocs' research. This is often the easiest entry point into classroom teaching.

Reach out to your department or program

Your department might have teaching needs that you are not aware of, such as undergraduate courses that need guest lecturers, lab sections that need instructors, or seminars that rotate teaching responsibilities. When appropriate and relevant, reach out to the undergraduate or graduate program director to inquire.

Sometimes, postdocs expressing interest in teaching might encounter skepticism or be seen as less committed to research. Consider talking informally with colleagues and trusted mentors to first gather a sense of the departmental norms and culture, and identify the best way to approach these conversations.

It can be especially valuable to cultivate a constellation of mentors rather than relying on a single person for guidance. Different mentors can offer distinct perspectives based on their experiences, career trajectories, and disciplinary contexts. Seeking advice from multiple individuals can help you gain a more



nuanced understanding of your options, identify opportunities and challenges you might not have considered, and make more informed decisions about your career path. We encourage you to build a diverse network of mentors who can provide broader support as your interests and career goals evolve over time.

Explore opportunities in other departments and programs

Teaching opportunities are not limited to your home department. Departments in related fields often need part-time instructors for upper-division courses, and interdisciplinary programs may be especially open to postdoctoral instructors with expertise in their disciplinary field. Consider reaching out directly to undergraduate or graduate program director to express your interest and describe your qualifications.

Look beyond your institution

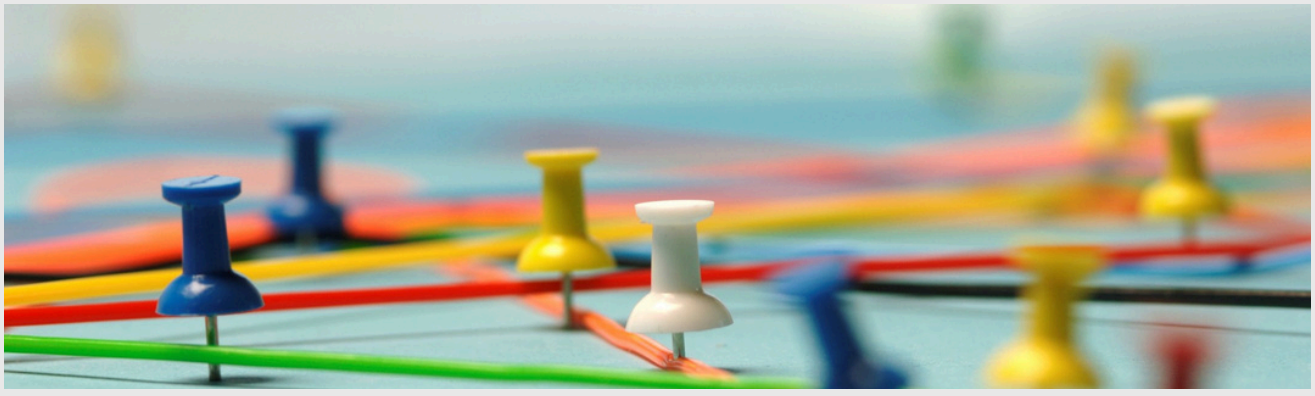
Community colleges or other institutions in your area often hire part-time (adjunct) instructors, and they can be excellent places to gain teaching experience as an instructor of record. Teaching at another institution also exposes you to a different student population that you might not encounter at your current university. It can be an experience that expands your teaching practice and broadens your perspective.

Beyond formal instruction, look for external guest lecture opportunities through professional associations, nonprofit organizations, or

community engagement initiatives (e.g., Students2Science) in your field. Other activities like mentoring undergraduate students in research, judging undergraduate poster competitions, organizing a workshop for students, and engaging in teaching development programs can all build your profile as an educator and leader without relying solely on a formal institutional experience.

Seek grants that fund teaching postdoc positions

If you are considering applying for another postdoc position, take advantage of grant programs that specifically fund postdoctoral positions combining research and teaching. These positions, sometimes called teaching postdocs or postdoctoral teaching fellowships, provide structured experience in both domains. Exploring these opportunities early can open a different kind of postdoctoral pathway. Ask colleagues in your field, check with your professional association, and identify funding opportunities from foundations and humanities endowments. Also make sure to check eligibility requirements as many grant programs require the applicants to be US citizens or permanent residents.



Teaching Without a Course: Uncovering the Hidden Teaching You Already Do

Many postdoctoral scholars underestimate the teaching they are already doing. If you are waiting until you stand in front of a classroom, you might be overlooking a rich set of experiences that are inherently educational in nature, and that can be meaningfully documented and discussed in your teaching portfolio.

The following activities all constitute legitimate teaching experience. They develop core pedagogical skills: Explaining complex ideas clearly, scaffolding learning, giving feedback, facilitating discussion, and adapting your approach to different learners.

Mentoring undergraduate and graduate research assistants

If you supervise undergraduate students in your lab or research group, you are teaching. You are helping students learn research methods, scientific reasoning, and professional skills. Reflect on how you structure that mentoring:

- How do you introduce students to new ideas or techniques?
- How do you explain the larger goal of their work in the lab?
- How do you give feedback on their performance?

As you regularly interact with and mentor students, think deliberately about questions listed above and refine your approach over time. Document your mentoring experience as part of your teaching development journey. Also check out the Effective Mentoring of Undergraduates in Research Workshop after which you can complete optional follow-up activities to earn a microbadge in mentoring undergraduate research.

Leading lab meetings

Facilitating lab meetings involves many of the same skills as classroom teaching, such as preparing and presenting material clearly, managing group discussion, fielding questions, and creating an environment where others feel comfortable contributing. If you regularly lead lab meetings or journal clubs, this is an experience worth documenting.

Observing or auditing a course

You might also consider observing a lecture or auditing a course taught by colleagues or your PI. By sitting in on lectures, seminars, or lab sections, you can study how experienced instructors structure their lessons, manage classroom dynamics, explain complex concepts, and engage students of varying

levels and backgrounds. During your observation, pay close attention to teaching methods or techniques that stand out to you, and take notes so that you can later adapt to your own teaching. To get the most out of the experience, you could also schedule a brief conversation with the instructor afterward to ask about their pedagogical choices and how they design their class sessions.

Presenting at academic events

Presenting research at academic events, such as conferences, symposia, and departmental seminars, develops many of the same core competencies as classroom teaching. Both require you to distill complex material into clear, accessible content within a defined time constraint, and both demand an awareness of your audience's background and familiarity with the subject. The process of preparing, delivering, and refining presentations builds skills that transfer directly to teaching, such as structuring a narrative, gauging audience understanding, and adjusting your communication as needed.

Community outreach and public engagement

Presenting your research to non-specialist audiences through science communication events, K-12 outreach programs, public lectures, or community partnerships, is a form of teaching that demonstrates your ability to make complex ideas accessible. These experiences speak to a broad understanding of education that many hiring committees will find compelling.

Documenting Your Teaching Development

An important part of teaching development is documenting it and articulating how you have grown and improved. Two types of documents are commonly used: Teaching philosophy statement and teaching portfolio.

Teaching philosophy statement

A teaching philosophy statement is a reflective document, typically one to two pages, in which you describe your approach to teaching and learning. It is not a list of courses you have taught; it is a narrative of why you teach the way you do, grounded in your values, your understanding of learning, and your authentic experience.

A strong teaching philosophy statement often includes the following content:

- Personal reflection on teaching and learning in higher education
  - Why do I teach?
  - What do I believe or value about teaching and learning?
  - How do I know when I've taught successfully?
  - What makes my teaching unique or effective?
- Evidence of sound pedagogical practice with specific examples
- Demonstration of the writer as a teacher and colleague

You do not need a full course of teaching under your belt to begin drafting a teaching philosophy. Start by identifying and reflecting on the teaching and mentoring experiences you have had so far, what you have learned from them, and what kind of educator you want to become. Seek feedback from mentors and colleagues, and revise it regularly as your experience grows.

Teaching portfolio

A teaching portfolio is a curated collection of materials that illustrates your teaching practice. It typically includes your teaching philosophy statement as well as supporting evidence of your teaching effectiveness and development. Common components include:

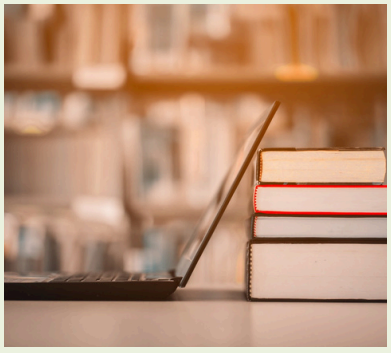
- Syllabi or course outlines you have designed
- Sample assignments, assessments, or rubrics
- Student feedback or evaluation summaries
- Teaching observation summaries
- Evidence of reflective practice – e.g., notes on what you tried, what worked, and what you changed
- Descriptions of mentoring and other teaching-related activities
- Courses that you can teach (even if you've never taught them) based on your areas of specialty or areas of competency

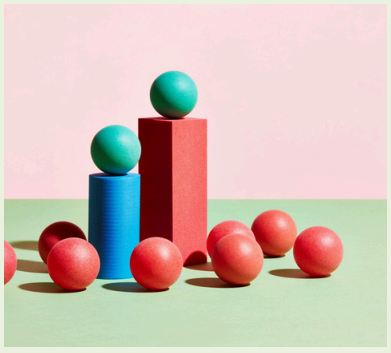
Participating in teaching development programs offered by your institution, such as teaching workshops and certificate programs, can also provide material for your portfolio, including certificates of completion, workshop reflections, and peer feedback.

Utilizing teaching resources on campus

You do not have to navigate teaching development alone. Most institutions offer a range of resources specifically designed to support instruction on campus. Making use of these resources signals genuine commitment to teaching and helps you build skills and a community of peers. The following outlines existing teaching support units at Rutgers-New Brunswick and Rutgers Health:

- Institute for Teaching, Innovation, and Inclusive Pedagogy (TIIP): offers a range of teaching development initiatives such as workshops, certificate programs, seminar courses, and communities of practice
- Biomedical PostDoc Professional Development Days (PD3), organized by the Assistant Vice Chancellor for Postdoctoral Affairs: offers opportunities to practice presenting your research, preparing for faculty positions, and network with other postdocs across campus
- Office of Teaching Evaluation and Assessment Research (OTEAR): supports teaching evaluation, assessment, and program review
- School of Arts and Sciences Teaching and Learning Team: offers teaching development programs, such as teaching conversations and Tea & Teaching series, for instructors within the School of Arts and Sciences and beyond





Additionally, do not underestimate the value of your peers. Building community with other postdocs is a powerful way to share knowledge and foster collaboration (McGugan, 2013; Nowell et al., 2019). Connect with other postdocs who are interested in teaching through formal postdoctoral associations, interdisciplinary reading groups, and informal networks. Check out the following postdoc support units and communities available at Rutgers:

- Office of Postdoctoral Advancement (OPA)
- Rutgers Postdoctoral Association
- Rutgers Health Office of Postdoctoral Affairs
- P3 Collaboratory for Pedagogy, Professional Development, and Publicly-Engaged Scholarship at Rutgers-Newark

Something as small as an informal conversation with colleagues plays an important role in helping early-career researchers gain insight into different teaching roles and opportunities. It can also serve as a meaningful source of guidance and encouragement. The people around you who are also developing as teachers can be among your most valuable resources.

Final Remarks

Teaching development during your postdoc is not a detour from your career. It is an investment in it. The skills you build as an educator will serve you in faculty positions, in industry, and in any other role where you communicate complex ideas and guide others' learning.

Start small and seek out support. We encourage you to approach teaching with the same curiosity, interest, and rigor that you bring to your research.

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- Dr. Itzamarie Chévere-Torres, Director of the Office of Postdoctoral Advancement
- Dr. Timothy Perrine, Postdoctoral Fellow, Philosophy

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