Applying to Predocs/Grad School

A Comprehensive Guide for Social Scientists

A Resource Guide for Undergraduate Students and Research Assistants

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Introduction

If you're an aspiring social scientist or curious about research opportunities after graduation, you're reading the right document. My goal is to provide you with comprehensive advice when it comes to finding post-grad opportunities that are research oriented. In particular, applying to PhDs and applying to predocs (also known as research assistantships). I aim to give you advice I learned through my experiences in the many PhD workshops I participated in, talks with professors, and other research summer gigs I've been fortunate enough to be a part of.

Some background about me: I graduated from the University of Southern California (USC) in Spring of 2025 with a B.S. in Economics and Mathematics and am currently a research fellow at Blueprint Labs, researching the effects of higher-education scholarships on both post-secondary and long-term outcomes. While at USC, I was a research assistant to Ben Graham in his lab, SPEC Lab, and had the opportunity to participate in the AEA Summer Program (AEASP), an economics-oriented research summer opportunity.

How This Document is Structured

I've structured this guide to address both paths comprehensively. While I haven't applied to PhDs myself, I have a few insights from my current position and undergraduate tenure that can be particularly helpful. When applicable, I'll link you to other well-written documents that answer specific questions in greater detail. I'll begin by talking about grad school, then proceed with my area of expertise: applying to predoctoral research jobs.

Part 1: Applying to Grad School

Is Grad School Right for You?

First, let's clarify what we're talking about. Graduate school encompasses a broad spectrum of programs: master's degrees, MBAs, and PhDs. From here on, when I refer to "grad school," I'm specifically discussing PhD programs unless otherwise noted. However, let me briefly address master's programs as they're somewhat controversial in academic circles.

A Cautionary Note on Master's Programs

Generally, I'd advise caution when considering master's programs. They're expensive and rarely fully covered by scholarships. If your ultimate goal is a doctorate, master's degrees are seldom necessary. However, there are legitimate reasons to pursue a master's:

1. **Career advancement without PhD commitment**: If you want to enhance workforce opportunities without spending 5-7 years on doctoral studies, and you've identified that a master's is essential for advancement in your chosen field, this path might make sense. I'd recommend working for a few years first to ensure it's the right choice—many companies will even cover partial or full tuition.
2. **Improving your Academics**: If your undergraduate GPA or coursework wasn't competitive for PhD programs, a master's can demonstrate your academic capabilities.
3. **Switching fields**: If your undergraduate major is unrelated to your intended PhD field, a master's provides necessary coursework and research opportunities in your new discipline.

The Reality of PhD Admissions

PhD admissions in the social sciences are notoriously noisy and unpredictable. Even stellar candidates face rejections from programs that seem like perfect fits. This uncertainty stems from multiple factors: limited spots (often 5-15 students per program), varying faculty interests year to year, funding constraints, and the subjective nature of evaluating research potential.

Given this inherent uncertainty, I strongly recommend applying to predocs positions simultaneously with PhD applications. Think of predocs as both a safety net and a strategic advantage—they guarantee you have a job after graduation while potentially strengthening your eventual PhD applications.

Programs and Experiences to Explore PhDs

Before committing to PhD applications, I highly recommend participating in programs designed to introduce undergraduates to academic research (if of course you're not applying this cycle). Here are three exceptional opportunities I personally participated in:

1. **IDDEAS (now called SUMMIT for some institutions)**: This two-day intensive program introduces outstanding undergraduates to business research and academia. It rotates between premier institutions like UPenn Wharton, Stanford GSB, and Chicago Booth. You'll attend research presentations, meet current PhD students, and gain insider perspectives on doctoral life. The networking opportunities alone make this invaluable.
2. **AEA Summer and Scholarship Programs**: This is a transformative two-month program offering intensive training in microeconomics, mathematics, econometrics, and research methods with leading faculty. It's specifically designed to prepare underrepresented students for graduate studies in economics. The program not only strengthens your technical skills but also connects you with a cohort of like-minded peers and mentors. Learn more at: https://www.aeaweb.org/about-aea/committees/aeasp
3. **NSF Research Experiences for Undergraduates (REU) and Related Programs**: The National Science Foundation funds numerous summer research opportunities including REUs and International Research Experiences for Students (IRES). These programs offer hands-on research experience, often with stipends, and can significantly strengthen your application. Find opportunities at: https://www.nsf.gov/funding/undergraduates#research-experiences-for-undergraduates-reu-3f1

Core Components of PhD Applications

1. **The GRE: Start Early, Plan for Retakes**
   Most social science PhD programs require GRE scores, though this is slowly changing. My advice: take it early—ideally by spring of your junior year. This timeline allows for retakes if needed (and most students do retake at least once). Aim for scores above the 80th percentile in quantitative sections for economics and quantitative social sciences; verbal requirements vary more by field.
2. **Coursework: Building Your Quantitative Foundation**
   PhD programs, especially in economics, look for strong quantitative preparation. Essential courses typically include:
   - Multivariable Calculus (through Calculus III)

- Linear Algebra
- Real Analysis (crucial for economics)
- Probability and Statistics (calculus-based)
- Econometrics or equivalent statistical methods courses

For detailed course recommendations specific to various programs, check the resources folder in our GitHub repository under "Grad School Resources."

3. **Letters of Recommendation: Quality Over Prestige**
   You'll need 3-4 letters, ideally from professors who know your research capabilities intimately. One strong letter from a professor who supervised your research is worth more than three generic letters from famous professors who barely know you. Start building these relationships early—take small classes, attend office hours, and seek research opportunities.
4. **Research Experience**
   While not always explicitly required, research experience dramatically strengthens your application. It demonstrates you understand what research entails and have relevant skills. This can include:
   - Working as an RA for professors
   - Independent study projects
   - Honor's thesis
   - Summer research programs
   - Predoctoral positions

Timeline for Social Science PhDs

- **Junior Year Spring/Summer**: Take GRE, participate in summer research programs
- **Senior Year July-September**: Request recommendation letters
- **Senior Year October-December**: Applications typically due
- **Senior Year March-April**: Admission decisions
- **Senior Year April 15**: Universal decision deadline

Essential Resources for PhD Applications

Rather than reinventing the wheel, I'm directing you to exceptional resources created by others who've successfully navigated this process. You can find many of these in the resources folder.

1. **Comprehensive Guides:**
   - "Applying to PhD Programs in Economics: An Extensive Guide". This incredibly detailed guide covers every application component thoroughly. It's economics-focused but applicable to all social sciences.
   - Tony Williams' "Admission to Econ PhD Programs: Comments, Advice, and Speculation from a Recent Applicant". This document offers personal insights and strategic advice from someone who recently went through the process.
   - Yael Courtney's PhD Application Guide: https://www.yaelcourtney.com/phdapplicationguide. An extensive blog with constantly updated advice.
2. **Official Resources:**
   - AEA's Guide to Considering Grad School: `https://www.aeaweb.org/resources/students/grad-prep/considerations`. While economics-specific, the general principles apply across social sciences
   - Economics Mentoring Program: https://www.economicsmentoringprogram.com/phd-application-resources. Includes GRE prep, LOR advice, and application strategies
   - The PhD Project: https://phdproject.org/getting-phd-ready/. Excellent resources for underrepresented minorities

- Carnegie Classifications: https://carnegieclassifications.acenet.edu/. Understand different institution types (good for deciding schools).

3. **Organizational Tools**
   In the GitHub repository's Grad School Resources folder, you'll find an application master list Excel template to track programs, deadlines, recommenders, and application components. Alternative template available at: `https://docs.google.com/spreadsheets/d/1JwFewOQ9pW7_in4rNVUAapQPgpkOWklR/template/preview`

Other Considerations

Remember that PhD admissions are inherently uncertain. Apply broadly—most applicants apply to 10-25 programs across different tiers. Include "reach" schools, target schools where you're competitive, and "safety" schools where you exceed average admitted students. Geography, faculty fit, and program culture matter as much as rankings.

Consider applying to related programs beyond your primary field. Economics students might apply to business school PhD programs, public policy, or political economy programs. Political science students might consider programs in government, international relations, or niche areas.

Part 2: Applying to Predocs

Why Consider a Predoc?

Predoctoral research positions have become increasingly popular and competitive in recent years, and for good reason. These positions offer a unique bridge between undergraduate studies and doctoral programs, providing invaluable experience and preparation. Let me share why I chose this path and why it might be right for you.

For me, after four intensive years of undergraduate study, I wasn't mentally prepared to immediately commit to another six years of doctoral work. I needed time to decompress, explore my research interests more deeply, and confirm that a PhD was indeed the right path. The predoc offered that breathing room while keeping me engaged in meaningful research.

Beyond personal readiness, predocs offer concrete advantages. You'll develop advanced technical skills, gain exposure to cutting-edge research methods, build relationships with researchers who can write recommendation letters, and often have opportunities to co-author papers. Many positions also allow you to audit graduate courses.

Understanding the Predoc Landscape

Predoc positions go by various names—research assistant, research analyst, research fellow, research associate—but they share common characteristics. These are typically 1-2 year positions (sometimes extendable to 3) where you work full-time supporting faculty research. Unlike undergraduate RA positions where you might work 10 hours per week on relatively simple tasks, predocs involve full-time commitment to substantive research responsibilities.

The work closely resembles what you might have done as an undergraduate RA, but with a few differences. The stakes are higher—you're contributing to publications, grants, and high-visibility projects. You'll handle more complex analytical tasks, manage larger datasets, and potentially supervise undergraduate RAs yourself. You're treated more as a junior colleague than a student, with corresponding expectations.

Application Timeline and Other Tips

The predoc application cycle differs significantly from PhD applications in both timing and approach. Most positions open in fall (September through November), with some continuing to post through spring. However, opportunities appear year-round, so stay vigilant. Some profs will post on their twitters and other's will be on the institution's website.

Unlike PhD applications where you might carefully select 10-15 programs, predoc applications should be numerous—apply to as many positions as genuinely interest you. There's no application fee (unlike PhD programs), and the primary cost is time. I recommend setting up job alerts on relevant platforms and checking weekly for new postings.

The timeline typically follows this pattern:

- **September-November**: Bulk of positions posted
- **October-January**: Initial applications due
- **November-February**: First-round interviews and coding tasks
- **December-March**: Final interviews and offers
- **March-May**: Some spring positions posted
- **June-August**: Start dates for most positions

Application Components

While predoc applications share many components with PhD applications, they have unique elements that require specific preparation.

Standard Components (Similar to PhD applications):

- CV/Resume (emphasizing research experience and technical skills)
- Transcripts (unofficial usually acceptable initially)
- Letters of recommendation (typically 2-3)
- Cover letter or statement of interest

Unique to Predoc Applications:

1. **Coding Tasks and Data Exercises:**
   Perhaps the most distinctive and challenging aspect of predoc applications are the technical assessments. After initial screening, you'll typically receive a data task that takes 4-8 hours to complete. You usually have a week to submit, though occasionally deadlines are shorter.

   These exercises typically involve:
   - Data cleaning and merging from multiple sources
   - Creating descriptive statistics and visualizations
   - Running regressions and interpreting results
   - Producing tables and figures
   - Writing brief memos explaining your findings

   What they're evaluating:
   - **Code efficiency**: Can you write clean, efficient code?
   - **Documentation**: Is your code well-commented and reproducible?
   - **Intuition**: Do you understand what you're doing, not just how to do it?
   - **Communication**: Can you explain technical results clearly?
   - **Attention to detail**: Are your outputs polished and professional?

2. **Interviews:**
   Unlike PhD programs, predocs involve extensive interviews—typically 2-3 rounds:
   (a) **Initial screening**: Often with current predocs or lab managers, focusing on basic fit and interest
   (b) **Technical interview**: May include live coding, discussing your data exercise, or statistical theory
   (c) **Final interview**: Usually with principal investigator(s), discussing research interests and fit

Managing the Application Season

Applying to predocs while completing your senior year requires exceptional time management. You might be juggling multiple data exercises simultaneously while maintaining your coursework and potentially writing a thesis. My advice:

1. **Course Load Management:**
   Take a lighter course load during application season if possible. Front-load challenging courses to earlier semesters. If you must take demanding courses, complete assignments ahead of schedule to create buffers for unexpected data exercises.
2. **Technical Preparation:**
   Most positions require proficiency in at least one of R, Stata, or Python. Many prefer multiple languages. Start learning early—ideally by junior year. Focus on:
   - Data manipulation (dplyr in R, pandas in Python, data management in Stata)
   - Regression analysis and econometrics packages
   - Creating publication-quality visualizations
   - Working with large datasets efficiently
   - Version control with Git (increasingly expected)

The GitHub repository includes coding resources like books on R and Python for data analysis. Refer to the "Essential Resources for Predoc Applications" section for more data task practice.

Pros and Cons of Predocs

Advantages:

A predoc can be a great fit if you want structured growth and a real test-drive of research. You get intensive technical training that genuinely moves the needle on your PhD readiness, plus deep exposure to multiple projects at different stages. You'll build a real network—within the lab and across institutions—and because you work closely with PIs, they can write detailed, informed letters that speak to how you think and execute. It's also a low-risk way to confirm that you actually enjoy research before committing six years to a PhD. Many roles come with education perks, like the chance to audit classes (and sometimes tuition support), and positions exist all over the world, so you can pair the professional growth with a new place and community.

Disadvantages:

That said, there are real trade-offs. Committing two (or more) years means you'll enter the PhD—and the academic job market—later. Compensation is typically modest (around $50k–$70k) relative to private-sector options, and roles can require moving, sometimes to pricey cities. The work can be intense around deadlines, and as a predoc you're mostly executing on someone else's research agenda rather than driving your own. Finally, there's no guarantee that doing a predoc will unlock a specific PhD outcome. It's a strong signal and a valuable learning experience, but not a magic key.

Essential Resources for Predoc Applications

Job Boards:

- NBER Research Assistant Positions: https://www.nber.org/career-resources/research-assistant-positions-not-nber
- Predoc.org: https://www.predoc.org/ – The most comprehensive aggregator
- EconJobMarket: https://econjobmarket.org/market
- Twitter/X @predoc_org: https://x.com/predoc_org – Real-time position announcements

Preparation Guides:

- Predoc.org's "How to Prepare": https://www.predoc.org/how-to-prepare
- "Cracking the Code: Your Step-by-Step Pre-doctoral Guide in Economics": https://medium.com/@jesitaa/cracking-the-code-your-step-by-step-pre-doctoral-guide-in-economics-198cb554a03c
- ESOC Predoc Training Materials: https://github.com/esoclabprinceton/ESOC-Predoc-Training

Comprehensive Resources:

- Glenn Fung's Predoc Guide: https://glenntfung.github.io/blog/2025/03/01/predoc/ – Exceptionally detailed guide covering application through job performance
- RA Guide: https://raguide.github.io/ – Well-organized, comprehensive resource
- Guide to Econ RA Computational Work: https://github.com/Alalalalaki/Guide2EconRA

Documents in Repository:

- "Applying_to_Pre_Doc_Memo.pdf" by Alvin Christian – Practical application advice
- "Pre-Doc Guide V4 PDF.pdf" by Alvin Christian – Guide to excelling once hired

Some Unsolicited Advice

Start Early:
Begin learning coding languages and statistical methods well before senior year. Seek research opportunities as early as sophomore year to build relevant experience and relationships with potential recommenders.

Cast a Wide Net:
Apply broadly—geography, institution type, and research area. You might discover unexpected interests or find great fits in unexpected places.

Market yourself:
Build a portfolio of your best work to reference during technical interviews. Many applicants don't go above and beyond to make public some of their code. This can be from class projects, RA work, or your thesis.

Maintain Perspective:
Use the predocs to clarify your research interests, develop skills, and build relationships. Some people discover through predocs that they don't want to pursue PhDs—that's valuable self-knowledge too.

Conclusion

Whether you choose to apply directly to PhD programs, or pursue a predoc position first, remember that there's no single "correct" path to an academic career. Your journey will be unique, shaped by your circumstances. The resources and advice in this guide come from many students and researchers. Use what resonates with you and don't hesitate to seek additional guidance from mentors, professors, and peers.

And remember that rejection is part of the process. Stay persistent, and remain open to unexpected opportunities. Good luck with your applications, and welcome to the exciting world of social science research!