

Ph.D. Tips & Tricks

Questions to ask yourself

1. Why are you getting a Ph.D.?
2. What do you want to do after your Ph.D.?
3. Who is doing what you want to do?
4. What did they do to get where they are?

Things to Consider

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| 1. A Ph.D. is not just research. | <i>What else am I being asked to do?</i> |
| 2. Be strategic. | <i>What can I do to achieve my goals?</i> |
| 3. Make your own opportunities. | <i>What do I need to get where I want to go?</i> |
| 4. It takes the right mindset. | <i>How do I approach failure?</i> |
| 5. Be proactive. | <i>How should I advocate for myself?</i> |
| 6. Be open to things around you. | <i>What is happening on campus, in the community, in the world?</i> |
| 7. Remember you aren't a "student". | <i>What is my role?</i> |
| 8. Set yourself up for success. | <i>What strategies can I use to be successful?</i> |
| 9. Reflect and learn how you think. | <i>Where and when do I come up with ideas?</i> |
| 10. Always do a little bit more than is expected. | <i>What can I do to be memorable?</i> |
| 11. Use strategies to stay organized. | <i>What can I do to keep track everything going on?</i> |
| 12. Always be kind and helpful to staff. | <i>Who is there to help me in the department?</i> |
| 13. Understand the value of sleep and rest. | <i>When should I go to bed?</i> |
| 14. B's get degrees. | <i>What are the course requirements to graduate?</i> |
| 15. Networking is not just LinkedIn. | <i>How can I start a conversation with someone new?</i> |
| 16. Do things to get noticed. | <i>How can I be memorable and recognized?</i> |
| 17. Go outside of your field. | <i>What is happening in other departments?</i> |
| 18. Know what's going on in your field. | <i>What are the hot topics in my field?</i> |
| 19. Practice communicating. | <i>Who is my audience?</i> |
| 20. Write with confidence. | <i>Does my writing evoke authority or timidity?</i> |
| 21. Learn how to write emails. | <i>Will my audience understand what I need from them?</i> |
| 22. Learn statistics. | <i>Is my experiment designed properly?</i> |
| 23. "Take chances, make mistakes, get messy". | <i>Why did my experiment (not) work?</i> |
| 24. Research is slow. | <i>What can I do while something is incubating?</i> |
| 25. Work with enthusiastic mentees. | <i>Why do my mentees come to the lab?</i> |
| 26. Supplement your skills with undergraduates. | <i>What do my undergraduates know that I don't?</i> |
| 27. Drop things that you don't enjoy. | <i>Am I getting the most out of this extracurricular?</i> |
| 28. Read your emails from the graduate school. | <i>Does UF have any workshops scheduled?</i> |
| 29. Be social. | <i>What are people doing in Gainesville?</i> |
| 30. Get out of your comfort zone. | <i>What's something new I can try?</i> |
| 31. Set aside weekly time to not Ph.D. | <i>What can I do to take a break?</i> |
| 32. Google it. | <i>How can I find the answer to my problem?</i> |
| 33. Bring solutions, not problems. | <i>What are your thoughts on this approach?</i> |
| 34. Know your process. | <i>Why do I do this step in my experiment?</i> |
| 35. Know your experiments inside and out. | <i>Why do I use this reagent from this vendor?</i> |
| 36. Find out what is expected of you. | <i>What does my advisor expect me to do while I am here?</i> |
| 37. Join a technical society. | <i>How can I be involved in my field?</i> |
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Resources

American Chemical Society (Dues: first year graduate student \$43.75 or graduate student \$87.50)

- [ChemIDP](#)
- [ACS Reviewer Lab](#)
- [Chemist](#)
- [C&EN](#)
- and more

AAAS (Dues: graduate student \$65 to \$95)

- [myIDP](#)
- [Workshops](#)
- [Science](#)

Websites

- [BioRender](#) (make professional science graphics)
- [Connected Papers](#) (a great place to start a literature review)
- [WolframAlpha](#) (do quick calculations and unit conversions)
- [Purdue Owl](#) (a great resource for writing)
- [Handbook of Biological Statistics](#) (a great primer for basic statistics)
- [NIST Engineering Statistics Handbook](#) (a great digital text for process statistics)
- [Minitab Help](#) (a great resource for statistics)
- [Web of Science](#) (a better place for literature review than Google)
- [Compendex](#) (a better place for literature review than Google)
- [Interloan Library](#) (get texts UF doesn't subscribe to already for free!)

Books

Professional Development

- [*Next Gen PhD: A Guide to Career Paths in Science*](#)
- [*Getting What You Came For*](#)
- [*A PhD Is Not Enough!: A Guide to Survival in Science*](#)
- [*The Professor Is In: The Essential Guide To Turning Your Ph.D. Into a Job*](#)
- [*At the Helm*](#)
- [*Lab Dynamics*](#)
- [*At the Bench*](#)
- [*Connecting with Companies*](#)

Communication

- [*The Chicago Guide to Communicating Science: Second Edition*](#)
- [*Don't Be Such a Scientist, Second Edition: Talking Substance in an Age of Style*](#)
- [*Essentials of Writing Biomedical Research Papers. Second Edition*](#)
- [*On Writing Well: The Classic Guide to Writing Nonfiction*](#)
- [*The Elements of Style, Fourth Edition*](#)
- [*The Scientist's Guide to Writing: How to Write More Easily and Effectively throughout Your Scientific Career*](#)
- [*Writing Science in Plain English \(Chicago Guides to Writing, Editing, and Publishing\)*](#)
- [*Whitesides' Group: Writing a Paper*](#)
- [*The Craft of Scientific Presentations - Critical Steps to Succeed and Critical Errors to Avoid*](#)

Research

- [*The Craft of Research, Fourth Edition*](#)
- [*Comprehensive Desk Reference of Polymer Characterization and Analysis*](#)
- [*Textbook of Medical Physiology*](#)
- [*Encyclopedia of Materials Characterization: Surfaces, Interfaces, Thin Films*](#)
- [*Design and Analysis of Experiments*](#)