

How to apply to grad school, timeline of events, & things you should know

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Outline of talk

- Attitudes & perceptions about grad school
- When should I be thinking about grad school?
- How do I pick a research topic and an advisor?
- How many schools should I apply to?
- What would make an advisor want to select me for grad school?
- Questions to ask advisors and grad students
- What fellowships should I be applying for?

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Attitudes & perceptions about grad school

- **Look into Research Experience for Undergraduates (REU)- need to be enrolled as student**
 - Applications due December/January and they fund summer research projects
 - https://www.nsf.gov/crssprgm/reu/reu_search.jsp
- **Getting into grad school depends on:**
 - your initiative and persistence- Make contact with potential advisor (!!!!!)
 - funding (do you have your own fellowship? or does the department have to hire you as a TA?)
 - if the advisor is taking new students that coming year
 - if the PI and grad students like you when you come to interview— DO NOT disregard the leverage grad students have in rooting for you
- **Typically, you DO NOT pay for a PhD**
 - You receive a stipend (~\$1,600 per month) and tuition and expenses are covered by the department
 - Fellowships give you more money (another reason to apply!)
- **Fellowships make you more attractive to ANY school**

Attitudes & perceptions about grad school

- **From the perspective of the advisor:**

- Having done research as an undergrad (= big +)
 - Presenting at conferences counts
- Having publications as an undergrad (= huge +)
- Letters of recommendation matter:
 - (1) Are they from people they know? If yes- they carry more weight
 - (2) Does the letter writer clearly know you rather than just being a student in their class?
- Different advisors look for different qualities- typically on their websites- *Highlight these qualities in your emails/interviews with them*
 - For examples: Cherie looks for: quantitative skills, stats, computer programming, modeling, etc.

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When should I be thinking about grad school?

- **It is never too early; but it can be too late**

- Too late = senior year and no research experience
- You will lose a year while you get research experience
 - But this might make you appreciate grad school more
 - More experience is always good

- **Start thinking about grad school in your 2nd year**

- Make a list of potential careers, examine the list realistically, and then, cut it in half (**How?** Think about what you would be doing on a day-to-day basis in any one career, and evaluate whether this is what you want to do [and what you have to wear])

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How do I pick a research topic and an advisor?

- **List making is essential:**

- Again- make a list of research topics that you are interested in (e.g., climate change, drug development, tadpole ecology)
- Then use search engines (e.g., google scholar, web of science, etc.) to find recent literature— read the papers
 - Note who the authors are and where they are from
 - Note the methods— would you be happy doing this kind of work? (e.g., sacrificing large numbers of animals, dissecting animals, feeding trials, histology, math, stats)
- Now— sort the original list of topics (favorite to least favorite) you made and delete the half you are least interested

How do I pick a research topic and an advisor?

- **From the list of topics identify the advisor:**

- From that new list of topics— identify the faculty that are responsible for the work
 - Look up their webpages— some may be post-docs or grad students
 - Look at their publications lists— Is the material that interested you a major focus of their lab?
 - If so— read everything you can find online about their lab (the students, post-docs, on-going projects, etc.)
- In the end this will help identify potential advisors
- Science is a small community- ask TAs, professors, mentors about these people- some advisors aren't the best.... And these people may have interacted with the advisor you are interested in working with

How do I pick a research topic and an advisor?

- **Now that you are familiar enough with the advisor's work—**

- Send an email to the faculty member expressing your interest in their lab (sample below)
- Typically done— August/September or earlier
- Deadlines for applying to grad school are: November to January [depends on school; check early]

Dear Dr. Chytrid,

I have followed your research with interest and am considering graduate programs for the Fall of 2018. Generally, I am fascinated by the ecology of emerging diseases, their spread, and transmission. I am more a field person than a lab scientist, and would enjoy working out the mechanics of transmission in the field. I have experience working in remote areas, designing projects, and managing support staff. I'll be finishing my degree Spring 2018 at UCSB, where I have been working with Dr. Cherie Briggs on an experiment involving co-infection with multiple parasites. I would appreciate discussing with you how my research interests might match projects in your lab. I have attached my CV. If you are accepting students, I would enjoy hearing back from you and putting together an application for the NSP Graduate Research Fellowship Program.

Thank you for your time and consideration,

Pseudacris regilla

How do I pick a research topic and an advisor?

- **One of two things will happen:**
 - (1) You will get an immediate reply with enthusiasm and details of lab projects plus an invitation to visit or talk
 - (2) You will not hear anything. Do not be discouraged, you have just identified someone you might not want to work with.
 - (3) It's okay to send a friendly reminder email 1 week later. Email is overwhelming and they can get lost.
- **In the first case, respond quickly and professionally. Be prepared to travel.**

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How many schools should I apply to?

- Be guided by the faculty responses you get
- Rank order the programs based on the responses and your independent assessment of the program and school
- Depending on how competitive you think you are, you can apply to 1 school or 20 (e.g., high GPA, good GRE scores, Pre-doctoral fellowship). Be realistic. Also be guided by the enthusiasm by the people you will be working with.
- Drawback = it is expensive.

How many schools should I apply to?

- **Graduate schools vary a lot in their admission criteria and practices**
 - (1) Students apply to a program, rather than a lab. Students might do rotations for the first year. A committee may select all the students admitted.
 - More common for molecular departments
 - GPA, GRE, and publications matter more here
 - (2) Conversely— individual faculty may control who they admit. This is more common for ecology.
 - Publications matter more here
- **Find out where each school/program you are applying to lies on this continuum**

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What would make an advisor want to select me for grad school?

- People typically look for young [but better] versions of themselves
- Everyone wants a lab full of enthusiastic, hard-working, curious people
- Independent funding (we will get to this next)
- Avoid anything that would label you as a flake
- Need to show commitment, persistence, dedication, motivation

What would make an advisor want to select me for grad school?

- **Consider this from the advisors' perspective, what are they afraid of (they are committing 5 years of their life to you!!)?**
 - (1) Flakes
 - (2) Lack of self-confidence, immaturity, dishonesty, irresponsibility, carelessness, indecisiveness, neediness (too dependent on advisor), lack of independent thought, procrastination

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List of questions to ask during an interview

- **Ask the advisor:**

- What is your mentoring style? What are your expectations? Do you expect students to work on your ongoing projects/systems? Or find others?
- What is the structure of the grad program? Core courses? (Ask yourself: Are you looking for an unstructured or structured program?)
- Be interested in the advisors research— be curious, ask questions — come up with thoughts on what the advisor is doing/has done.
 - Be prepared to talk about their research and have thought about it (this helps them assess dedication and how much you have looked into their research)
- Discuss funding opportunities and grants with the advisor
 - Ask them what pre-doctoral fellowship they recommend you apply for
- Be prepared to talk about research ideas (this can be vague— but have a general sense)
 - If you are going to apply for the NSF GRFP- then you may already have a proposal

List of questions to ask during an interview

- **Ask the grad students:**

- See if you can get any hints on how the advisor is as a mentor (how do they treat students? Any warning signs of overworking students, emotional abuse, too busy to meet with you? Don't dismiss their concerns!)
- How did they pick their project? How flexible was the advisor?
- How independent as a grad student are you? What does your schedule look like? Is the advisor a micro-manager or micro-knower?
- Ask about quality of life: You want to get a sense of are they happy and if they can afford to live on the money they make from the school (*You shouldn't pay your way for a PhD— TA-ships and fellowships provide stipends)

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What fellowships should I be applying for?

- National science foundation graduate research fellowship
 - <https://www.nsfgrfp.org/>
 - No need to follow through with the proposed work. Funding individual as a scientist, not the work.
- GEM Fellowship
 - <https://www.gemfellowship.org/>
- Ford Foundation
 - <http://sites.nationalacademies.org/pga/fordfellowships/index.htm>
- Switzer Foundation
 - <http://www.switzernetwork.org/become-fellow/how-apply>
- EPA star fellowship
 - <https://www.epa.gov/research-fellowships>
- National parks fellowship [depends on where you will be working- you can get money from field stations]
- Look on ECOLOG and EVOLDIR listservs for funding and research opportunities
 - <http://www.lsoft.com/scripts/wl.exe?SL1=ECOLOG-L&H=LISTSERV.UMD.EDU>
 - <http://www.uwosh.edu/facstaff/mcpheem/job-information/subscribe-to-evoldir-listserve>
- The university also has advisors who can help you find funding support tailored to your interests and abilities

Any questions?

Before you leave- please hand in the survey to
me (Grace)
And thank you for listening!!!