NAVIGATING GRAD SCHOOL

A student-to-student guide to succeeding in the Department of Biological Sciences

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Content contributed by current and past BIOSCI graduate students as a service to current and future grads.

TABLE OF CONTENTS

A LETTER FROM THE EDITORS

Hello there, fellow scientists!

We put together this grad guide in hopes of helping out our peers. We know that grad school is challenging and sometimes even isolating, so we hope that this guide can serve as a reminder that everyone belongs in this community and that it's okay to ask for help. Though It may sometimes feel like you're drowning in a sea of papers and responsibilities, you'd be surprised at how many people feel the same way. We're all there with you and here for you.

This guide was originally written in a very unique and chaotic time (thank you COVID-19). We tried to cover the major milestones of the graduate student experience, important contacts and places, helpful resources for navigating graduate studies in our department, and things that we personally wish we had known about sooner. When we were going through these milestones ourselves, we learned a lot from word of mouth, which was sometimes right and a lot of times wrong. We hope that having this information centralized will help to lessen the confusion. All information presented is accurate to the best of our knowledge and as current as we could manage. This is also a living document, sections are actively changing and receiving updates as the department and world around us change. It is our hope that you find this supplemental guide helpful and we will continue to do our best to make sure our grad community stays connected and well informed.

If there's something that you'd like to see in this guide, and/or want to be involved in the next iteration, please feel free to contact BioSci GSO at bsgso@pitt.edu. We would love to hear your feedback! If you've benefited or will benefit in some way from this guide, please consider contributing in some form.

Disclaimer: Please still read the official grad guide (https://www.biology.pitt.edu/sites/default/files/graduate-forms/GradGuide_AY24.pdf). This is meant as a supplement to that guide with practical information from current students and alumni who have been through each of these steps.

Sincerely,

Casey Guidry
Tessa Rhinehart
Faith Rovenolt

QUICK AND LIGHT PEER ADVICE

So far, you beat the odds and you made it here. This is a good thing. Congratulations! Take a moment to celebrate this about yourself. There will be many moments where you will forget that being here on its own is a great achievement, worthy of celebration. So, please congratulate and celebrate yourself every time you see this and anytime you need a reminder of just how great you are.

A few graduate students, including some who are now alumni, had the following words of wisdom to help you navigate through graduate school. Some of this you will already know, but what's important about this advice is that it will be here, where you can find a reminder if you forget along the way.

Planning and Open-Mindedness

Planning ahead is a good thing. Plans could be as detailed as possible if need be. One could even plan and set up all three rotations early, but even if you have your mind set about everything, come with an open mind and do not settle on anything without exploring the possibilities in and outside our department. You never know what you will discover about yourself and your science.

Don't compare your PhD to journey to anyone else's. PhDs are a very individualized process, and everyone's path - time, publications, etc - will be unique to them. Comparing your path to another's will only cause stress because one path isn't "better" than anyone else's- it's just different.

Make a budget, stay on top of your notifications (e.g. don't have 100+ unread emails in your inbox--try to respond to emails within 24 hours except on holidays/weekends), get an external monitor or ask your PI/lab for one, carry around extra chargers for everything, pick up some form of exercise, go outside at least once a day, don't wear the same clothes you wore all day to bed, go to therapy, go to the dentist, get yearly physicals, find a network of mentors.

Positive Attitude About Criticism

You can always improve on almost anything you do. Do NOT take information on how to improve to mean failure. This is meant to build you and not break you. Do NOT take criticism about your science personally. Remember that you are great. You are an advocate for your science but not a measure of it. The data are the data. You are the scientist. You are not one and the same.

Ask for feedback from your lab mates and your PI. Ask how they think you are doing and how you can improve. There is always something you can work on. So, why not hear about it earlier instead of potentially letting it surprise you at the end? It shows that you're proactive and ready to learn. Asking for feedback can also make you more receptive to it than when it comes by surprise.

Motivation

Find motivation anywhere that you can: in the lab, in your PI, in your friends, in your family, in your other circles, and in yourself. Consider what motivates you when joining a lab and pick a lab that aligns with your motivations. This will help you during burnout season. Remember that you can always learn a type of science (rotations all the way to post-docs) but you cannot always change the people you find in

the lab. Make sure you get along with the lab and that they build you up.

Work/Life Balance

Do things you like as often as you can, even if it's on a Sunday at 4 pm or 6 pm. Try to do them every week. Take moments for yourself. Plan to take moments for yourself. Force yourself to take moments for yourself. Give yourself time for yourself. Graduate school is a marathon and you will perform better and, most importantly, feel better if you make the effort to maintain hobbies, you-time, and a few boundaries between you and your work! You will be better for it.

Have at least one full day every week to do ZERO science. Burnout is a real thing. Obviously, sometimes it's crunch time. Maybe you're trying to get a paper out, have way too much homework, or have a seminar coming up. But try to generally take one full day off. The work won't go anywhere; it will be waiting for you when you get back. You can run the gel tomorrow, it's fine.

Make friends that are not in science. No, going out with science friends and promising not to discuss science is not the same thing. So we repeat: make friends that are not in science. There is something very refreshing about talking to someone who has no idea what RNA is. You need that outside perspective, even if you think that you do not. You need to disconnect from science when you're not in Langley, Crawford, or Clapp.

Nothing good happens after 8 pm in the lab. Granted, there will be days when you will have to work late to get that last experiment run or writing finished. But doing so constantly will burn you out hard. You will get tired and will start making trivial mistakes.

You are ONE person. You cannot do it all. PRIORITIZE.

Persistence

The following phrases are incredibly overrated, and frankly, often abused: "Never give up" or "Don't quit". In science, and in life, it's important to know when to give up or quit the things that aren't serving you. It's not a sign of weakness, it's the strength of being able to come to terms with the fact that something isn't working and being brave enough to find a different path that does. If a specific set of techniques isn't getting you anywhere, try a different method. If your project is genuinely doomed, pick up a side project that might be more fruitful or change the direction of your project. When nothing is going right, go left. Shift your path or pave a path to the direction of least resistance.

Scientist, PhD

You have good ideas too. Sometimes they are better than the ideas of others, even your PI's Do not be so quick to disregard yourself. Read the literature. Keep up on your field and your field adjacent. Seminars that don't sound related to what you sometimes have techniques and spins on what you do.

Ask for Help

Each of us had help in some form along the way from other grad students. You are absolutely not being a burden by asking for help. Seek out help as soon as you realize you are in doubt. People in the department are willing to help answer questions and assist with problems you might be dealing with or direct you to the right person who could help you. We want to see you succeed and achieve every milestone.

Don’t be afraid. Ask for help. Do not dwell on it alone. Talk to someone. It saves time and heartache and breeds creative ideas both from others and even yourself.

We are a science community, not a group of isolated labs. If you are having trouble with an experiment, want help figuring out how to run an experiment, need a specific reagent you happen to lack, or need advice interpreting results, ask the grads in the labs around you. Just be sure to respect their time as they are taking time out of their schedule to help you.

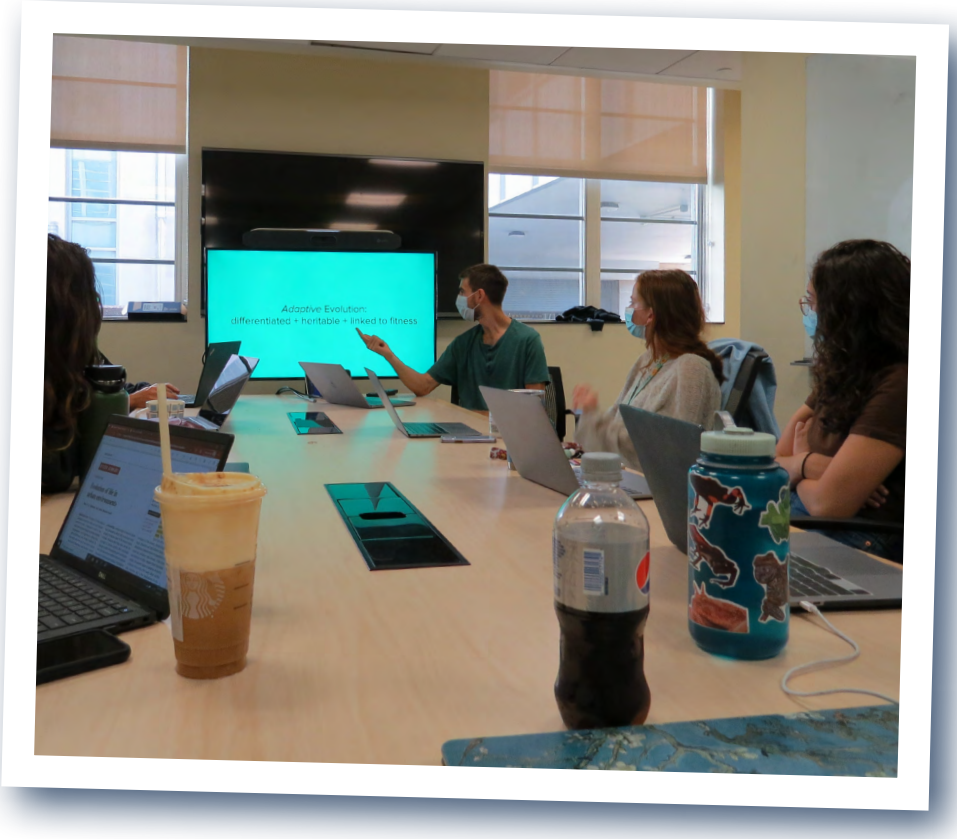
Communication is key!! If something is wrong, have a discussion with your PI.

Google is your best friend and savior.

Explore

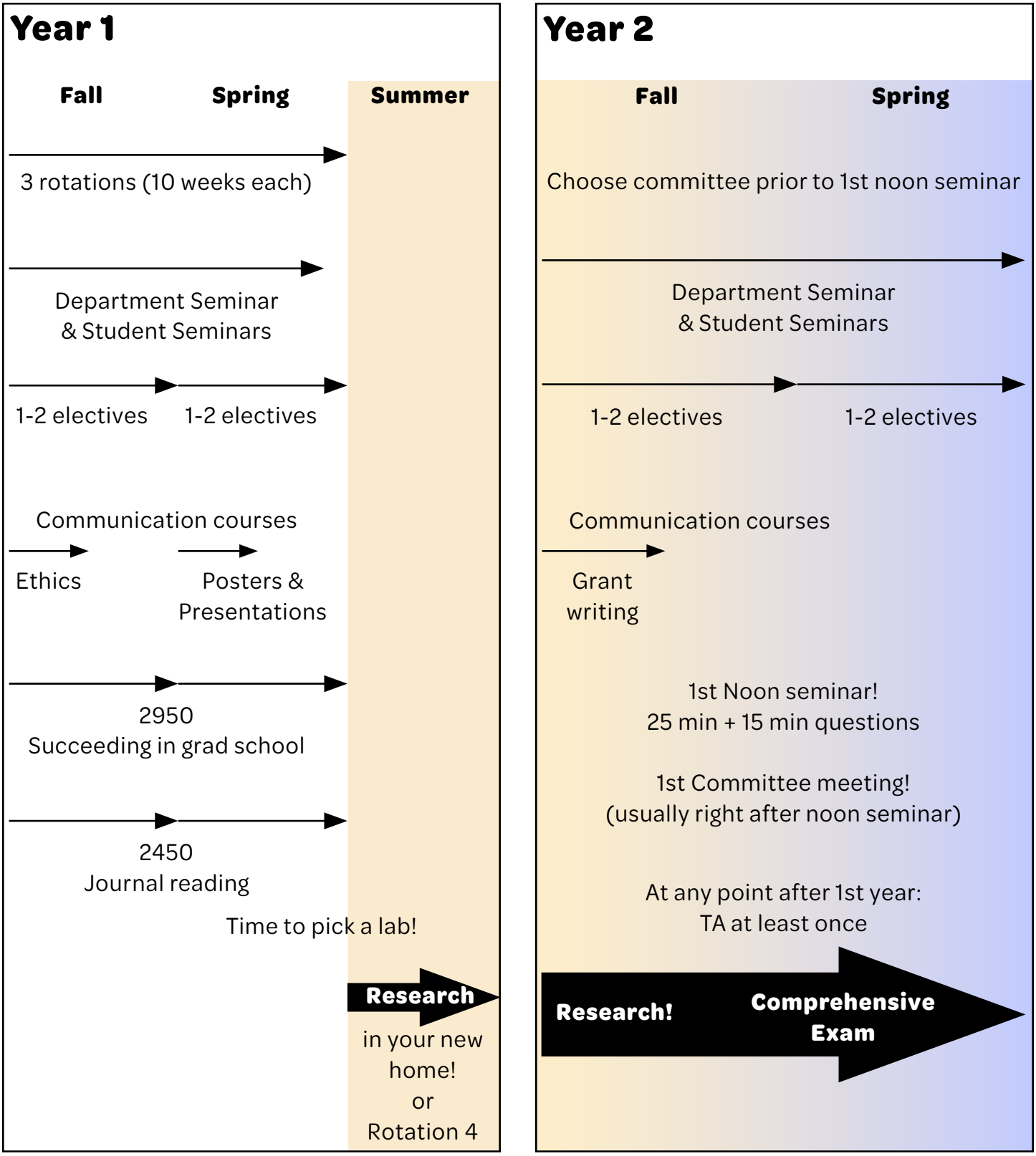
Take advantage of opportunities outside of the lab. You could volunteer with an organization you are passionate about and/or find ways to contribute to your community. If you cannot find one, you can start one. It can serve as a reminder that you have an identity outside of lab, and has the added advantage of helping you to build your soft skills.
Connect with your cohort. They are going through the same classes as you, and they probably have similar questions and insecurities. They may also have different specialties; it’s not a competition. Connect with other graduate students, too. Most graduate students are very willing to help you if you reach out. Remember that we’re a community!

Agree to become a mentee. An ally with experience can help you explore the department in a way you did not think you would.



CURRICULUM OVERVIEW

There's a lot to get done before graduation! We've put together a roadmap overviewing the big steps between Day 1 and Dr!



Year 3+

Fall **Spring**

Overview meeting
any point after comps, but must be done 8 months before expected defense date

Department Seminar
& Student Seminars

Communication courses

Paper writing

Annual Noon seminar
30-45 min + 15 min questions

Annual Committee meetings!
(usually right after noon seminar)

Research! **Defense**

You did it! Congrats, Doctor!


GEORGE HUBBARD CLAPP HALL

ROTATIONS

Since the information given in this section was mostly written and edited by MCDB graduate students and because of how the department works, the information given here likely pertains more to MCDB than EE students. However, we do include some EE perspective. We tried to give information specific to our department by thinking of specific labs as we wrote, but there are many other helpful external resources such as this: https://biomed.emory.edu/PROGRAM_SITES/GMB/_includes/documents/sections/resources/choosing-a-thesis-lab.pdf

We chose to write this section because we genuinely enjoyed our rotations but realized that many graduate students don't share the same feelings. We hope that this section will help to make your first year here a little easier and more enjoyable.

General Info

Our department requires **(3) 10 week rotations.** If you're in the MCDB program, your rotations will be in 3 different labs. If you are in the EE program, it's possible for you to do 2 of your 3 rotations in the lab you intend on joining, if you would like. If after 3 rotations you're unable to identify a lab home, you can do a 4th rotation. However, this lab must be able to cover your summer semester funding and will automatically be your home lab. At the end of each rotation, all rotation students deliver rotation talks to the department. You are evaluated and given a rotation report after the end of your rotation. The rotation report contains a grade that contributes to your GPA. Note: A GPA of 3.00 must be maintained at all times to be in good standing.

Rotations officially begin when classes begin. However, you can start your first rotation early, if you'd like. If you want to start early, contact the PI whose lab you would like to start your rotation in and find out if it is possible (financially, and convenience-wise for the lab). You don't have to have all of your rotations lined up at the start of classes though. In fact, we highly suggest that you don't do that because you learn more about your interests and labs through noon seminars, talking to grad students, and as you rotate in different labs.

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Factors to consider before you decide on a rotation

What type(s) of science are you interested in? You can get an idea of what each lab works on the traditional way by browsing the departmental website, clicking through the PIs, and visiting their websites. Science Twitter is quite popular now, so you can likely browse lab interests that way as well. You should also pay attention during noon seminars. For MCDB students, these are on Fridays, while EE noon seminars are on Wednesdays. The disadvantage of this method is that you may

not hear a seminar from a lab that you could potentially be interested in before you have to decide on rotations. For EE students, a general piece of advice is to not let yourself get pigeonholed into choosing labs that are related to your system. You can learn relevant concepts and skills while also getting to learn new information that could potentially help you bridge gaps between your field and your rotation lab's.

What type of mentoring style works best for you? Do you learn better or work best when you have a mentor that is more hands-on or would you prefer that your mentor let you figure it out at your own pace? Do you need to meet with your mentor multiple times a month? How would you like your mentor to give you feedback? There are PIs who prefer the sink-or-swim method, some who prefer to pop in throughout the day, some who will let you approach when you're ready, and others who you'll rarely see because of their schedules. Choose a PI who you think will work best with you. Remember that you will need to feel comfortable communicating with your PI. Though you won't really know if their style will work for you before you rotate, you can get an idea of the PI's mentoring style by asking that PI directly. You can also ask their graduate students. Keep in mind that graduate students outside of their lab (who may not have rotated) may also give their opinion and repeat hearsay, but remember that it's best to hear it directly from someone in the lab of interest! It's important to keep in mind that the professors you rotate with have a good chance of ending up on your committee so also keep that in mind when deciding what type of mentoring styles you want present throughout your entire graduate career. COVID has also made it where we are all a bit more spread out than we would usually be, so an important question when setting up your rotations may be how the professors' mentoring style has changed over the course of the pandemic. Do they always make themselves available when they are in their office or do they always want to schedule meetings in advance as we do with zoom meetings? How often do they work from home and how often can you?

What type of lab environment/culture would you prefer? Though the lab changes as the graduate students and postdocs that comprise it move on, the typical lab culture often lasts (and the PI remains, obviously). Some labs never work weekends, while other labs typically work weekends (even if they're not required by the PI). Some labs work at set hours of the day, while other labs allow for more flexible hours. Some labs enjoy hanging out with each other outside of the department, while others prefer to see other friends. Some labs chat with their PIs about their personal lives freely, while other labs prefer to keep things separate. As you can hopefully see, lab cultures in our department greatly vary from lab to lab. Lab culture is hard to glean before you rotate, but talking to graduate students in the labs you're considering would definitely give you some insight. Again, keep in mind that other graduate students may associate specific cultures with certain labs, but judge the labs for yourself from your conversations with graduate students in the lab of interest and if you choose to rotate!

What do you want to get from a rotation? Are you looking to learn specific techniques? Are you looking to try a different field of science? Are you looking to figure out what type of mentoring style works for you? All of these are valid reasons to rotate in a lab. How you choose is totally up to you!

Is the lab accepting students? For MCDB students, the goal is to find a home lab. It would

be wise to rotate in labs that are accepting students. Ask the PI directly about how many students they are willing to take this year. You want to be able to have more than one option because spots in labs are limited, and other students may want to rotate in the same labs as you. However, keep in mind that grad school is not a competition (at least it should not be, and it is definitely not in this department).

What are your career goals? Are you considering academia? Do you already know that you'd prefer a career outside of academia? If you are considering academia, choosing a lab that is more established in the field would definitely help you. Has the lab graduated any students that have stayed in academia? Are you considering a career outside of academia? How might that PI respond to that goal? Has that PI graduated a student who is in that field? Does that PI have connections to industry? Everyone comes in with different ideas about what they want to do after grad school. Some aren't even really sure yet, and that's okay.

Please keep in mind that your first rotation advisor is your first-year advisor. You may want to consider rotating in a lab that has had a few students for your first rotation because they will be more informed on how the department and program works. If you want to rotate in a new lab, you can always do it for second or third rotations.

The purpose of a rotation (from an MCDB graduate student perspective)

The overall goal of a rotation for MCDB students is to find a thesis advisor and lab home, but considering the following during your rotation will hopefully help you figure out if this lab is right for you.

- Do I get along with the other lab members and enjoy working with them?
- Am I engaged while I'm in the lab?
- Do I feel comfortable communicating with the PI?
- Is this PI supportive of my goals and life situation?
- How does this PI interact with their graduate students, and would this work for me?

Questions to ask the PI before you decide to rotate

- Are you taking new students into the lab? (MCDB only)
- Is there funding to support me? (MCDB only)
- What open projects or research opportunities are there in your lab currently? (EE only)
- How would you describe your mentorship style?

- What are your expectations for me?
- What makes for a successful rotation?
- What makes a student successful in your lab, beyond rotation?
- What are some papers that you would suggest I read to get a better understanding of my rotation project or potential projects?

Questions to ask graduate students in the lab before you rotate

- How would you describe your PI's mentorship style?
- What do you think makes a student successful in the lab?
- What type of student do you think your PI works best with?
- What characteristics do you think make a student a good fit for the lab?

Questions to ask the PI prior to beginning your rotation or within the first week

- What are your expectations for me, as a rotation student?
- Do you have specific work hours?
- "I will work hard during my rotation, but I want to make sure that I'm available when you expect to see me."
- Can we schedule 1-1 meetings? (weekly, bi-weekly?).
- "I like to make sure that I can get feedback on how I'm doing in the lab and how I can improve."

How to have a successful rotation (From a graduate student perspective)

It's hard trying to figure out how to balance your classes, lab, and life outside of grad school. Every person has their own priorities, but your rotations matter just as much, if not more, than your coursework. You need to pass your classes AND find a home lab (if you're an MCDB student). Some rotation advisors may even serve on your committee. Our main tips can be summarized into three points: 1) communicate, 2) show initiative, and 3) work hard. The first year is hard; do what's best for your physical and mental health. Be kind to yourself, and remember that you're here to learn.

Communicate

- **Ask for feedback from PI and your go-to person** - maybe even other people in the lab, if you've interacted with them. Not many PIs will tell you exactly how they think you're progressing in the lab if you don't directly ask. It's better to know how you can improve before you can't do anything about it.
  - How did you think I did this week?
  - Are there things that you think I could have done differently?
- **Inform your PI of your schedule,** which includes your classes and recurring appointments, so that they know you're not just skipping out on lab time. There's no need to specify what your appointments

are if you'd rather not. If you have a go-to person in the lab, inform them too, to show that you respect their time. If you're unable to come into the lab for whatever reason, let both know.

- **Spend time with the grad students in the lab** you're rotating in. Do this by coming in early, staying late, or grabbing food. When PIs leave, grad students talk more freely.
- **Learn about other projects in the lab** by talking to the people in the lab. It shows that you're interested in your surroundings and the people. Don't be too chatty while people are trying to work though. Remind them that it's okay for them to tell you they're busy if you're concerned that you may be overstepping.
- **Take responsibility** if you've made a mistake or have broken something. Every student has broken something or made mistakes in the lab. Taking responsibility earns trust. If you've made a mistake or deviated from protocol, mention it. Doing so early can save time in the long run as mistakes can perpetuate. For example, did you mistakenly dispose of all of your protein fractions at the first step? If so, you want to acknowledge that ASAP because no protein means that there's no need to waste the next few days moving forward in the purification protocol. Acknowledging your mistakes early could also mean that there could be steps you can take to minimize loss.
- **Keep your go-to person in the loop**, especially if you need their help that day or the next day. It's best to ask if they're available before the day of.
- When you meet with the PI, **present all of the experiments you've done in the lab, including experiments that didn't quite pan out**. Even if they may have failed, you can show that you've learned or how you're going to troubleshoot. This shows that you've been working hard and that you're thinking critically.

Show Initiative

- **Take notes** when you are being taught how to do something or shown where things are even if you don't think it'll make a ton of sense later. Trust us, it helps to revisit those notes, especially because you'll be learning a lot in your rotations. If you have time, try making them legible; this process will help you to review the day.
- Don't be afraid to **ask questions about science**, but also try to read about it yourself before you ask. If you start off by saying that you were reading a paper on XYZ, and it made you wonder about ABC, then it shows that you've thought about whatever you're asking before you ask.
- **Seek out papers related to your project** yourself and ask questions!
- When an experiment doesn't turn out the way you expected, **try troubleshooting by yourself first**. Consult your go-to person after you've thought about potential routes.
  - Did I deviate from the protocol?
  - Did I add all of the reagents?
  - Did I do my math correctly?
  - How might I do things differently next time to test my hypothesis?
- **Ask for protocols ahead of time** and ask questions after you've read them:
  - What are good stopping points? It's a good idea to ask about this because you have classes and other appointments throughout the day that you'll need to plan around.
  - Are there points in here where I'll need you to show me how to set things up? You're being respectful of other people's time by asking.
  - Make sure you understand not only what you need to physically do, but also think about what's happening at the molecular

level. You can always make sure you understand by recapping with your go-to person or PI.

- **Come up with a potential schedule**, and ask if this would work with your go-to person, if you still need their help.
  - Does this make sense?
  - What do you typically do to make your use of time more efficient?

Work hard

- The paperwork mentions something about a 20-hour work week, but in reality, you are likely expected to work more than that. You should discuss expectations with your PI.
- **Come in before your PI and leave after your PI, if possible**. Though it's not super important and doesn't reflect how hard you actually work, PIs still like to see this. (Note: this is the opinion of the original writer of this section and not shared by all students).
- **Come in on the weekends as needed**. This point is likely going to be controversial, but doing so will lessen your workload during the week and/or speed up your timeline. For example, bacterial growths can span several days, but coming in to do a transformation or begin overnight (~10m-1.5hrs) can put you ahead by two days. If you need the break for your sanity, definitely take a day or two off over the weekend. (Note: again, this is the opinion of the original writer of this section and not shared by all students).
- **Don't work on your old rotation projects in a new rotation**. Try not to go and visit those labs after you've rotated. Some labs can be sensitive about your time. (Note: this is relevant mostly to MCDB students; for EE students, you will still be in communication with your home lab).
- **Spend your downtime wisely**. Most PIs are okay with you working on classwork during downtime, but ask graduate students in the lab just in case. Definitely avoid social media and aimless scrolling on your phone.
  - Is there something else that you need to do today or later in the week in the lab that you can do now?

The rotation talk

The rotation talk marks the end of your rotation. Each rotation student gives a 12-15 min presentation with time for questions at the end. The talks take the entire day, and the entire department is invited (though not all will attend). Because the areas of interest for our department are so broad, the talks should take that into account and should be tailored for both MCDB and EE attendees. As with any talk, people look for a coherent story. It's okay if you don't have conclusive data; people often don't! Much of the structure will stay the same but everything may be virtual. Everyone has their own style of presenting, but generally, it follows the format below:

- Big picture
- Why people should care
- Important data that led up to your project
- Question you're addressing
- Hypothesis
- Data
- Conclusions
- Future directions
- Acknowledgments

Quick tips:

- Try doing a run-through of your talk in 219B the day before, so that you get an idea of where you want to stand, the colors, and how you might want the podium situated before your talk. Ask Cathy for availability. We still like doing this for noon seminars because it gives you an idea of how to project your voice, how you might be able to walk around the podium, and how to set up

the projector.
- Do a practice talk at least once! Most labs schedule this in, but if not, ask.
- Focus on a central story! By this we mean don't include ALL of your data. By the time you give your presentation, your rotation PI should already know how hard you've worked. They are the ones who evaluate you.
- Be prepared to answer questions. As you prepare your talk, think of possible questions so that you can ask your PI and labmates if you cannot come up with an answer by yourself.

Evaluation

There's a form that PIs will fill out after your rotation. Some PIs will meet with you beforehand to discuss your rotation. We recommend that you actually go through these categories about halfway through the rotation so that you're not surprised by your scores at the end of the rotation. It gives you time to make changes if needed.

- Grade
  - Would you be prepared to accept this student for dissertation research in your lab?
- Probably, possibly, unlikely
- Scoring the following categories with a scale of: Outstanding, Above expectations, Meets expectations, Below expectations, Unsatisfactory
  - Overall assessment
  - General knowledge
  - Expertise in area of specialization
  - Ability to design experiments
  - Ability to execute experiments
  - Ability to interpret experiments
  - Seminar performance
  - Level of independence
  - Intellectual contribution
  - Interaction with others
  - General comments

Factors to consider when choosing a lab - Resources

The link shared at the beginning of this section is a really great resource; there are extensive questions included that you may want to consider asking. Below are a few more resources:

- https://blog.addgene.org/is-this-the-right-place-for-me-8-tactics-for-choosing-a-lab
- http://blogs.nature.com/boston/2007/07/10/guide-to-graduate-students-how-to-pick-a-lab
- https://swap.stanford.edu/was/20150621161733/http://biosciences.stanford.edu/current/incoming/choosing-a-lab/index.html
- https://bitesizebio.com/24772/how-to-choose-the-right-phd-lab/
- https://www.sciencemag.org/careers/2003/10/choosing-thesis-lab
- https://www.insidehighered.com/blogs/gradhacker/choosing-dissertation-lab

FAQs

Can you rotate in labs of faculty that are associated with MCDB or EE if you're not in that specific program?

Yes! In fact, students from the MCDB program have joined the labs of EE faculty and vice versa.

What are the deadlines for deciding on each rotation?

The first rotation starts when classes start. The second and third rotations begin after the first and second rotation talks. You should decide on your rotations at least a week before the end of these rotations. Some labs will need more time to prepare for you, so even earlier

would be best. Again, we would advise against choosing all of your rotations too early.

What is the deadline for deciding on your home lab?

Students typically identify their lab homes by the end of the 3rd rotation (rotation talk #3). However, some students have had to wait until after their talks for PI decisions. There's also an instance where a student waited a few days after their last rotation talk. Though it's not unheard of to wait, it's best to try to know before the end of the third rotation.

How do you decide on a lab? What's the process like?

Everyone approaches this a little differently. Our biggest tip here is if you're considering more than one lab, to make sure that you emphasize that you haven't decided on a lab yet at your first meeting. Below is an example process:

- Meet with the PIs whose labs you're interested in. Mention that you're POTENTIALLY interested in joining their lab and that you'd like to meet to talk about potential projects etc. Let them know that you need to think about it and that you'll get back to them. We stress the word "potentially" in order to avoid miscommunication. You want to make it clear that you are still considering other labs
- Talk to the members of the lab. We suggest doing this one-on-one and outside of the lab so that you can both speak openly.
- Set up meetings with the PIs you met with earlier. You can set up my meetings with all of the PIs in the same week, with your top choice lab being the first so you can potentially get a "yes" before you say "no" to the other lab(s). Emphasize that you would like to be the one to share the news with the other PIs before the news spreads on its own.
- Meet with the PIs of the other labs to let them know that you've chosen.

GRAD COURSES

Within the department

The department typically offers a few sets of grad courses on an "every other year" basis. These courses are taught by tenure-stream faculty and tend to act as a very focused dive into a subject.

Graduate courses in our department tend to focus more on reading journal papers, discussions, and presentations. Several courses will also integrate hands-on activities where possible (ex: RNA-seq analysis in Transcriptomics). Class sizes tend to max out at 20 students (but are often much smaller than that), just due to the size of the cohorts, and will typically include first- and second-year students in our department. This means you'll share classes with the cohort above and below yours most often.

You can also take some undergraduate courses in the department and across the University for graduate credit. However, these may not count towards the course credit requirement. Any course offered for fewer than 2 credits will not count. You will want to stay updated on approved course offerings by paying attention to Cathy Barr's emails, but a list can be found in the official grad guide or here: https://www.biology.pitt.edu/graduate/courses

Outside of the department

Expectations and course design for courses outside our department may vary. If you're interested in courses outside of the department, check the official grad guide appendix for a list of pre-approved courses. If a course isn't listed, you'll need approval from the DGS (Director of Graduate Studies). We've collected feedback from several grad students in the department about courses they've taken and collected it here for you!

MSCBMP 2852: Research Seminar in Cellular Biological Membrane Trafficking

Deepa Kumari (Class taken in 2016):

- One of my favorite graduate courses.
- There were many instructors who would teach one/two classes.
- A student would present on a topic every class, and then we would discuss two assigned papers.
- It was well organized. All the information, including papers, topics, etc. was provided in the syllabus.
- Class environment was not stressful at all. I would definitely recommend it to anybody who would be interested.
- It's all about membrane trafficking, so it's much more helpful to the Brodsky lab students

Grant Daskivich (Class taken in 2018):

- Focuses on cell biology
- Small class size gave a lot of opportunity to get to know various professors in both our department and the medical school
- The material was varied, which meant that if you weren't super interested in the topic that day, it was likely that the next lecture could be more appealing/applicable to your work.
- Reasonable workload
- We had plenty of time to work on take-home exams as our grade for the course.

Nga (Katie) Hong Nguyen (Class taken in 2018):

- I'd definitely recommend it to people who are interested in knowing more about cellular trafficking (ER, membrane, vesicles,

etc.), quality control pathways, and lipid composition/biosynthesis.
- It is a relatively small class, so it was heavily discussion-based, and we had weekly presentations and/or journal club, so it was helpful in many ways.
- The class is in the summer so you can get it out of the way and have a free spring to prep for comps.
- Only downsides:
  - It isn't offered every year
  - If your labs don't work on the topics some of the papers can be challenging

Morgan Webb (Class taken in 2019):
- Anyone interested in learning more about how proteins are synthesized in the ER, acquire post-translational modifications, and then are trafficked through the Golgi to the plasma membrane will find this class really interesting.
- Workload was not overbearing at all and just required two in-class presentations per student and weekly reading
- Attendance is important to getting a good grade but since the class only meets once per week, it's definitely doable.
- The professors are also very kind and understanding and allowed me to miss class when I got married and went on my honeymoon for a week and a half.
- Overall, I definitely recommend this class and I encourage anyone with questions to reach out to me.

Ivan Belashov (Class taken in 2019):
- This course is unique in that it covers the overall picture on what is happening inside of the cells - it is like a tour of the inner workings of the cell. The course describes in great detail from what the cells are made of - to the functions of each cellular organelle and the processes they regulate.
- There were many instructors for the course (~8), many from the Cell Biology Department, and the lectures were mainly in the format of open discussions.
- Besides the textbook material, this course also dissected papers, and we discussed the newest techniques and approaches, the approaches that can be applied to all biological sciences really.
- I would highly recommend the course.

EPIDEM 2725: Reproductive Development from Model Organisms to Humans

Rachel Bainbridge (Class taken in 2019):
- The course was a great overview of every aspect of reproductive biology. We covered a variety of topics - everything from germ cell development, hormones, a very thorough look at meiosis, fertilization, parturition, genomic imprinting, the placenta, epigenetics of pregnancy, and contraception and drug development.
- The course meets twice a week at the Magee Women's Research Institute. There is typically a new lecturer each week, who lectures for one class and then oversees a student-led journal club for the other class. Each lecturer is an expert in their field. Because each lecturer is a researcher in their topic, they also tend to heavily incorporate real data and research techniques into their lectures.
- I would definitely recommend this class to anyone with an interest in reproduction, and anyone who is thinking of attending FIR.

MSMVM 3410: Microbial Pathogenesis

Sarah Sokol Borrelli (Class taken 2016):
- It had both a lecture and journal club portion. Most weeks had a different instructor who talked about the pathogen that was their main focus. It was pretty bacteria-focused when I took it.
- It also had 2 exams, if I remember correctly, but they were pretty straightforward. I took

this course the second semester of my first year, and it was manageable with my other coursework and rotations.
- The only negative was that it was held at Bridgeside Point II, and getting there and back on time took about an hour to an hour and a half extra with how the shuttle schedule was set up. But there is a somewhat reasonably priced parking garage right across the street, so driving as opposed to relying on the shuttle was actually feasible.
- I think I would recommend this to students who join the pathogen-focused labs in our department. It was also nice to meet some of the other pathogen people at Pitt, which might be useful for collaboration or external committee members.
- I enjoyed having some coursework that helped build on my pathogen foundation, but I think this course would be less useful if students were undecided on whether they were actually joining a pathogen lab because the content isn't as broad as some of the courses taught in our department.

CMPBIO 2075: Molecular Evolution

Wesley Phelps (Class taken in 2017):
- The teachers were clearly well-versed in the field and were always willing/able to help. I've used a lot of the resources from that class to be useful in my own work.
- The actual teaching was very math/ model focused with little theory behind it explained. It really felt like there was a lot of relevant, background science they skipped over. At the very least, my background was not strong enough in evolution to really know so keeping up was a bit of a struggle. I got the sense that the other people from our department were in the same boat.
- On the whole, though, I think it was worthwhile. As I said, I still have all my handouts, powerpoints, and notes from it. I refer to them every now and then when I find myself doing evolution things. I wouldn't recommend it as a "for fun" or "credit fill" class though.

Anonymous (Class taken in 2017):
- Weekly (or bi-weekly?) assignments heavily relied on computational skills (R). In the first session of class, the instructors told us that R proficiency was not a requirement and that the course was tailored for all, even people with zero experience. This was absolutely not the case. Because of this, I spent most of my time struggling with R and not being able to focus on the concepts. Even though we formed study groups with other students who were R-savvy, we still struggled.
- I would have found the course to be more beneficial had there been a stronger focus on the biological relevance of concepts. To me, it felt like there was a lack of substantial connection to the biological problems which made it difficult to find meaning from the formulas and exercises, and so I struggled to extract the impact and take-home messages.
- I can see it being a great class for computational-oriented students, those proficient in R (or determined to be), those interested in population genetics, or those interested in larger data sets.
- When I took the class, we had assignments, 2 exams, and a final project plus presentation. This might not seem like a lot to students who have different rotation schedules (systems bio department) but was heavy for me as a first year with rotation research as my first priority.
- I took the class ~3 years ago (yikes), and have heard that they've made changes to make it a little easier and more inclusive since.

Andrea Fetters (Class taken in 2017):

- I took this class in the Spring of my first year.
- At first, I wasn't sure if it was useful because of everything we were learning how to do in R, the computational tools we were learning how to use, and the concepts we were exploring seemed way more complicated than what I needed.
- Once I truly figured out what I wanted to study for my dissertation, knowing how to use alignment- and phylogeny-building tools and being able to think more deeply about evolution has been extremely valuable.
- It was a lot of work, and thankfully we were allowed to work in groups on assignments, but I do recommend the course to anyone in our department.

MSCBIO 2025: Introduction to Bioinformatics Programming in Python

Christian Gauthier (Class taken in 2018):

- This is not a terribly friendly course for people who have never done any programming. However, for anyone who is at least somewhat familiar with Python, it should be doable.
- The course serves primarily to teach a little bit about how to use the available Python packages for protein structural work, MD simulations, image processing, etc. The homework assignments were non-trivial.
- I would recommend it (with reservations) to someone in our department who has at least used R before (even if not Python), and only if they have a light course load in that semester
- I am not aware of another course that's offered that would accomplish the same goals, so I can't recommend an alternative. For anyone else who lacks a programming background with at least R, I would recommend that they take the CS department's Introduction to Python first, to lay the groundwork.

MOLBPH 2001: Molecular Biophysics I: Structural biophysics

Elaine Nguyen (Class taken in 2018):

- I took this course Fall semester of my second year in hopes of reviewing the theory behind biophysical techniques and to better understand crystallography theory. This course goes into detail on quantum physics, X-ray crystallography theory, NMR theory, touches on cryo-EM, CD, techniques for nucleic acid-protein interactions, and more, and is taught by several PIs whose labs use these techniques regularly.
- This was math-heavy, especially within the first few weeks. For example, do you remember Hamiltonians from high school? I didn't. It does get better (fewer derivations and calculations), but I don't think that students in our department need to go into the level of detail that this course did on the aforementioned techniques.
- Unlike courses offered within our department, this course is not discussion-based. Rather, there were exams after each section. The course load was also quite heavy compared to the courses offered within our department. This course is a requirement for the MBSB 1st years, so it may be due to differences in our programs.
- This class is offered at BST3 and met 3x a week for more than an hour (I can't remember how long; maybe 1.5 hrs?)
- I hesitate to recommend this course to students in our department. If you're looking to improve your knowledge of crystallography theory, I would instead recommend doing a book club with other students and your PI using Crystallography Made Crystal Clear.

COMMITTEE MEETINGS

Every student is required to have a committee meeting once a year, beginning with their second year after their first noon seminar. Committee meetings typically take place on the same day as noon seminars, but they are not required to happen on the same day. An overview meeting can count as your annual committee meeting unless you'd really like to meet again. Committee meetings can happen every six months though, should your committee and you feel the need. There is no minimum or maximum length for a committee meeting, though it usually lasts at least an hour.

Responsibilities

- ❑ **Find a time** that works for your committee. We usually start by consulting my PI to find their schedule and work around that. You can use when2meet or Doodle poll with a 2-week time frame.
- ❑ **Reserve a room and/or prepare for a virtual/hybrid meeting**. If you want 219A, the conference room adjacent to 219B, you'll have to ask Cathy Barr. If you want any of the other rooms, there are physical planners in the cabinet on the left as you enter the main office. Even if you have a remote meeting, it can be nice to have a room outside of your home to host the meeting from. For hybrid or remote meetings, check the official department guide (Dissertation Committee section and Appendix H: DS&AS Dissertation Committee Policy) to see if you can and to get approval. For example, external committee members can request remote attendance for both the overview and defense. Hybrid meetings may also be necessary if someone on your committee is on sabbatical. You'll need to set up a zoom meeting and send out the link to all members of your committee. It may be a smart move to make your PI a co-host to the meeting in case some issues arise and you lose connection, it will not kick out everyone.
- ❑ **Turn in your committee document and annual report 1 week before your meeting** via email; CC Cathy Barr. Both documents can be found on the Pitt BioSci website under the "Documents" section. It would be a good idea to get edits from your PI before you submit your documents, so communicate with your PI to figure out a good timeline to receive edits.
- ❑ Send your **abstract to the assigned faculty member a week before your noon seminar**. They are the ones who email out noon seminar schedules. Like with your committee document, it's also a good idea to receive edits from your PI before your submission.
- ❑ **Send reminder emails** to your committee members the day of your noon seminar and meeting.
- ❑ Bring your laptop to your meeting and any dongles/adapters necessary to connect to the projector.

Choosing your committee members

You need **three members within the department and one external member.** You don't need your external member until your overview meeting, though some choose to include them even before their overview meeting for their insight. **You choose your committee with your PI.** We suggest coming up with some names before discussing them with your PI. Some choose PIs that they've rotated with, but you're not required to do so. One advantage to including a PI you've rotated with is that they would be able to write a more

personalized reference letter. Your committee chair is chosen by the DGS (Director of Graduate Studies).

Everyone has different reasons for putting a person on their committee. Here are some examples:

- Someone who is outside of your field, but related tangentially who can ask big-picture questions
- Someone who uses similar types of techniques or the same model organism
- People who you know are already supportive of you
- Someone who may be able to help you after grad school because of their connections and can write strong reference letters

How do you ask someone to be on your committee?

There isn't one "right" way to ask a PI to serve on your committee. Typically, students reach out via email. In the email, briefly summarize your project in 2-3 sentences, why you think they'd make a good committee member, and that you'd be open to meeting to discuss your project. Once you figure out who will be serving on your committee, email the DGS and CC Cathy Barr with the names of your PI and your committee members.

How permanent is your committee?

It's easy to change out your committee members before you have your overview meeting. You just need approval from the DGS, and to inform Cathy after approval. If you need to change members of your committee after your overview meeting, there's a lot more paperwork involved. See the official grad guide.

Questions to ask at your first committee meeting (Fall of your 2nd year)

Because this is the committee meeting you have the semester before your comprehensive exam, you should take advantage of the time to ask questions. What is permitted with one committee may not be the same with another committee, so be sure to ask!

1. To what extent should I know about _____ topic?
2. Can I have post-docs review my document?
3. Can I have post-docs attend my mock exam/practice talk?
4. Can I send you my specific aims page?
5. For the oral presentation/defense, is there a limitation on the number of slides? Some faculty members limit you here.
6. When I turn in my written proposal via email, would you also like a printed copy submitted to you? Some faculty members prefer physical copies.
7. If you've written a grant with your PI, ask about how much you can use of that in your written proposal.

What happens at the meeting?

1. Your committee arrives and kicks you out of the room for a few minutes while they discuss you and anything they want. Virtual meeting: Usually you send all members to a breakout room for them to discuss these things or you can make your PI the host and have them send you to a breakout room and invite you back once they're finished talking.
2. They ask you to come back into the room, and you discuss your project and plans with your committee. This could include asking you questions to clarify things you've talked about at your

seminar and/or in your document and giving you suggestions.

3. Everyone leaves and eventually, you get a committee report from Cathy, that your committee chair fills out.

Before your 1st noon seminar and committee meeting checklist

- ❑ Assemble your committee
- ❑ Schedule your committee meeting (typically same day as noon seminar)
- ❑ **Abstract** (See committee meeting section)
  - Email to faculty member in charge **1 week** before
- ❑ **Committee report**
  - Email to your committee **1 week** before your meeting
  - Template here: https://www.biology.pitt.edu/graduate/docs
- ❑ **Annual Report**
  - Email to your committee **1 week** before your meeting
  - Template here: https://www.biology.pitt.edu/graduate/docs

COMPREHENSIVE EXAMS

First, take a deep breath! You've made it through your first year, so you can make it through your second year, too! The comprehensive exam should be completed during the **spring semester of your second year**, with some exceptions (e.g. medical emergency, switching labs, your advisor leaving, TAing during the semester, extended absences for fieldwork).

The exam consists of a **written proposal** sent to you by your committee, which is then followed two weeks later by an **oral defense/presentation** of your proposal and general knowledge. Many graduate students also prepare a **specific aims page** early in the semester summarizing their written proposal, which they then meet with their committee members to receive feedback on. Examples of proposals, presentations, and specific aims pages are all available on the GSO "Comprehensive Exam Resources" page.

You do not need your external committee member for your comps, but your committee members must be on the list of "Pitt Graduate Faculty" in the department's official grad guide. New faculty members may not yet be considered Graduate Faculty by the time of your exam, so you would need another Graduate Faculty member to be present at your oral defense. Keep in mind that this means that you will have an extra voice at your exam.

Remember that your comps should be your work and your work alone. You can seek advice from other grad students, but they should not be rewriting your proposal. You're allowed to discuss it with your advisor or your committee members as colleagues, but they can't give detailed feedback. Postdocs are likely fine to get advice from but check with your chair if they can review your document or attend your mock presentation.

From a graduate student's perspective, the goals of the exam are to:

- Get you to focus on your project and where it lies in your field
- Push you to the limits of your knowledge, so that you know what you can work on
- Get you to think critically
- Give you practice writing proposals

From the faculty's perspective, the exam is a checkpoint to make sure you can conduct truly independent research.

Remember that **your committee members want you to succeed**! "Weeding out" occurs in our department at the end of the first year.

Comps To-Do List

In brief, what are the things you have to do to get ready for comps, and when?

What to do (Blue = required, orange = recommended)	**When**
Schedule your oral exam date. Exams are usually held in March or April; prioritize the dates you'd prefer.	As early in spring semester as possible
Book a room for your oral exam, if it is in-person (book 2 hours plus setup time for MCDB, 3 hours plus setup time for EE)	As soon as you know the date
Send a **specific aims page** to your committee members	December or January
Meet with each committee member, especially your chair, to discuss specific aims and exam expectations	January-early February
Study **general knowledge** for your oral exam	Throughout semester
Prepare your written proposal	Throughout semester
Use a calendar, accountability buddy, writing group, or other ideas in the following sections to **stay on track**	Throughout semester
Get feedback from other grad students on your proposal	3-4 weeks before oral exam
Create a **presentation** that describes your written proposal	When proposal is almost done
Send your written proposal to your committee and turn in a physical copy if your committee requests it	2 weeks before oral exam
Have a **practice comps exam** with other grad students	1 week before oral exam
Email reminders to your committee of the date and time of your exam	1 week or 1-2 days before exam
Complete your **oral exam**	March-April, or May for special circumstances
Do **any conditional pass assignments or re-examinations**	March-June

This all will take a lot of time! Many advisors expect that preparing for your comps (including studying, reading, writing, and creating your presentation) **will take about ⅓ to ½ of your time each week** during your comps semester–if you're working a 40-hour week, that's 14-20 hours per week. Alternatively, some people set aside 4-5 weeks to just write.

If you need time to just work on your exam without doing any lab work, tell your PI. Communication is key. Ask your advisor what their expectations are. Some PIs do not expect any research outputs during the comprehensive exam semester!

Specific Aims

The Specific Aims is a one-page document which **introduces your 2-3 research aims**, including describing the background, methods, hypotheses, and outcomes. You can also include figures or diagrams in it.

Sharing the Specific Aims page in advance isn't typically required, but is **highly recommended** for getting feedback on your ideas and understanding your committee members' expectations.

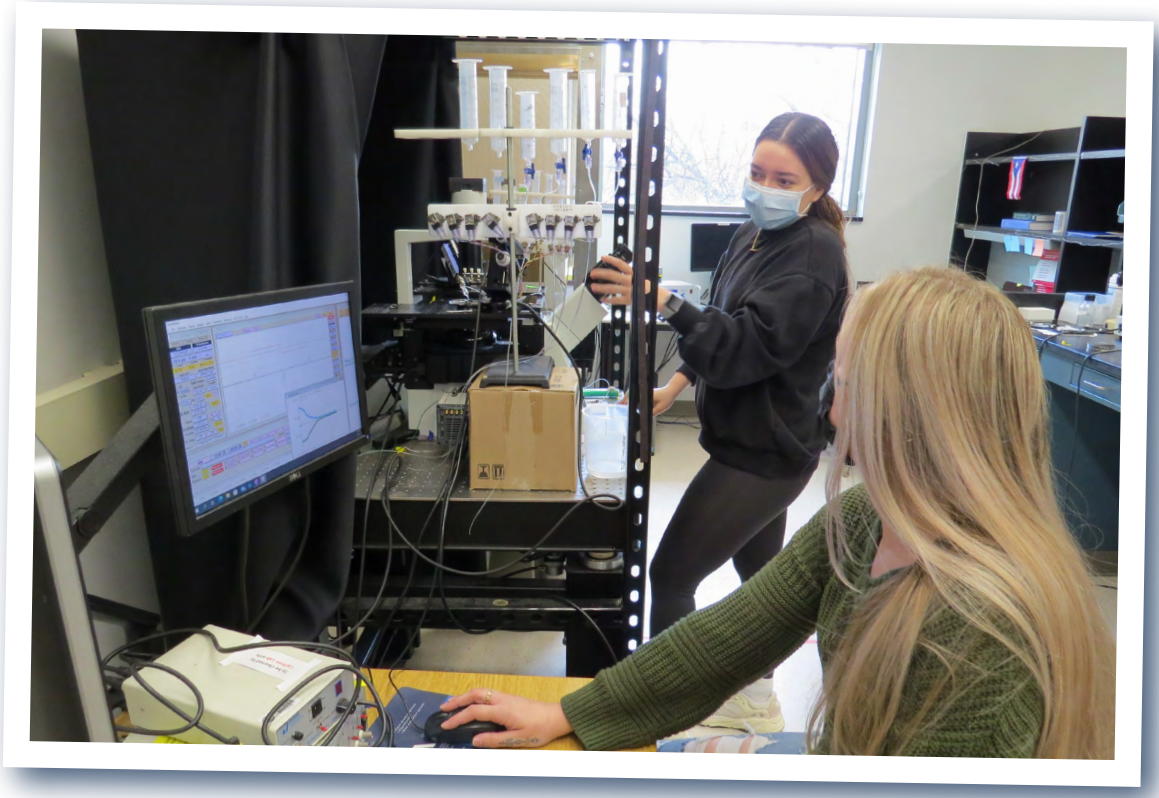
Typically, you prepare your specific aims page in December/January, send it to your committee members, and **schedule one-on-one meetings with each committee member** in January or early February.

In each meeting, discuss the specific aims and general expectations for the exam, such as:

- Is my Specific Aims document on the right track? Am I proposing too much or too little? Is it original enough?
- Can you assign any readings to me? What topics or subfields will you expect me to know? Some committee members will give you a reading list like books, others just vague topics.
- What are your thoughts on some specific emerging topics in the field?
- What kinds of questions will you ask during the exam? What's the balance of historical vs. contemporary information you will want me to know?

During your meeting with your committee chair, ask how they run their exams, because they mostly decide the format.

- Do I need a printed copy of my comps document along with a pdf?
- How much time do I have for an introduction/background?
- Do I have a page limitation for the document?
- Am I allowed to have notes?
- Is there a limit on the number of slides I can have during the comps presentation?
- If your committee members disagree on expectations, ask your chair to help you sort out what you should do.



Written Proposal

The proposal describes the research plan that you hope to complete for your PhD. It has a **page limit of 15 (0.5 in margins, single-spaced)**, not including references, and is due 2 weeks before your oral exam/defense. The format is usually in the style of a fellowship for MCDB (NIH, AHA, ACS) or an NSF Standard Grant for EE.

Information about the proposal can be found in the department's official grad guide, but some general tips are:

- The proposal should think through what your experiments are going to tell you: controls, how to interpret results, alternative outcomes, and potential pitfalls
- Don't worry if you don't have a ton of preliminary data. Your committee isn't judging you on how much data you already have
- In EE, documents usually approach the 15-page limit, or about 10,000 words. In MCDB, documents tend to be shorter. Ask your committee beforehand what they want
- There is no limit to the number of citations that go into your proposal, and they don't count towards your page limit. In MCDB, every citation could be fair game to be asked about
- In MCDB, ⅓ of the comps should be about something your advisor isn't the expert on or they didn't help shape the idea. This could be one aim out of three or could pepper this through the exam in sub-aims.

Below are some additional tips, but remember everyone is different and not every tip will work for you:

- Start writing early! Not only do you not have to know everything to start writing, but writing will help you organize your thinking and studying process
    - Start with your fellowship application from grants & fellowships as a baseline
- Separate your writing from your editing. Dump a bunch of words on the page and don't criticize them until you're out of writing mode.
- **Check out the comps documents from other students**. They can be helpful for understanding formatting and appreciating the similarities and differences between each document.
    - Comprehensive documents contributed by other Pitt BioSci students are currently being moved to the new BioSci GSO account but reach out to either other students yourself for documents or GSO members for link(s)
- Get **feedback** on the proposal from both inside and outside your lab
- Send each aim to different people to spread the love
- Get advice from students in the labs of your committee members
- Give everyone enough time to provide feedback
- Faculty members (including your advisor) can't give direct feedback on your proposal. However, you can treat your advisor and committee members as colleagues and talk to them about your ideas (e.g. Is this an interesting project idea? Where would I find a method that can accomplish X?)
- To reduce procrastination, **get an accountability buddy or working group**. Reserve a room to work in the same space with your cohort, share what you

accomplished last week and your goals for the next week, and bring snacks and work together.
- If you are someone who needs a schedule, **try planning out your writing on a calendar**, taking into account that you may need some breather days
- Set formal external deadlines for yourself, working backwards, for example:
  - When is my exam scheduled?
  - 2 weeks before that, submit the document
  - 1.5 weeks before submission, have my document done and sent for peer feedback
  - If you're getting feedback, explicitly tell your reviewers when you want to receive it by and give them enough time
- Pavlov yourself: do something you love as a reward for each goal you complete or deadline you hit
- Take writing breaks! Take care of yourself both physically and mentally!

Studying for the exam

As you create your written exam and prepare for your oral exam, you'll need to know both specific information about your proposal (e.g. methods, important previous papers, etc.) and general knowledge (e.g. from textbooks and reviews).

How do you know what to study?

- Ask your committee
  - Recommendations for **textbooks or papers**
  - **Topics or disciplines** you should be familiar with
  - Areas of the proposal they may be concerned about
- Use your proposal
  - Start writing and it will help you identify what to read
  - General knowledge needed for the introduction to your proposal and the introduction for each of your aims
  - Reviews or textbooks about **the subfields, concepts, or theories** your proposal is related to
  - Know the important papers your proposal relies on
- Anticipate questions
  - Read your proposal, think **"What am I scared they are going to ask me?", and figure out the answers!**
  - Ask grad students who have your committee members on their committees what to expect
  - Make a **list of definitions**

Some tips for paper reading and general reading:

- Keep notes organized by topic, e.g.
  - Why your citations are relevant to your proposal
  - General knowledge for each aim
- Hoard all your papers using an organization system
  - Mendeley
  - Zotero
  - Paperpile
  - LabArchives (access through your Pitt account)

- Try to read something most days
  - Use a calendar and give yourself a sticker whenever you read
  - Focus To-Do (Free and paid version)
- Find the papers most similar to each of your aims and read through the introduction, see which papers get cited again and again
- Find papers
  - Google Scholar paper alerts
  - https://www.connectedpapers.com/
  - https://inciteful.xyz/
  - https://openknowledgemaps.org/
  - https://scite.ai/
  - https://elicit.org/
  - https://consensus.app/
  - https://www.researchrabbit.ai/
  - https://www.jstor.org/analyze/
  - https://www.chatpdf.com/

Oral Exam

The oral exam/defense is a **presentation of your written proposal** which mirrors the content in the proposal. Your committee will listen to your presentation and ask you questions about both your proposal and your general background knowledge.

The goal of the oral examination is to **identify the limits of your knowledge and gaps in your research proposal** so that you can address these later. Don't be discouraged if your committee members ask you questions you don't know the answer to; just talk through how you'd figure it out.

Your exam can be in-person or virtual; ask your committee members if they have a preference or any constraints–also check the department guide about virtual meeting guidelines. Hybrid exams are typically discouraged because it can be hard for the remote attendee(s) to participate.

Preparing your presentation

The presentation is **different from most presentations you've given before**

- **In MCDB, your presentation might be interrupted by questions or given out of order.** For example, your committee could choose to focus on Aim 2 instead of starting on Aim 1. The exam is usually 1.5-2 hours long. You may not get through your presentation.
- **In EE, the presentation is typically not interrupted by questions.** Usually, the exam consists of 20 minutes of presentation, 1 hour of questions on your proposal, and 1 hour of questions on general knowledge.
- Your committee can ask you questions that can range from general biology knowledge to questions specific to the proposed methodology.
  - How does this instrument work?
  - If ___ happens, then what could it mean?
  - How might you test ___ hypothesis?
  - What might be some controls you'd need for ___ experiment?
  - What kind of statistical model are you using?
  - Why are you proposing to use ___ method instead of ___ method?
  - Who originally proposed the theory you're testing?
- In EE, the general knowledge questions are typically higher-level questions and definitions tailored to your research. Historical questions are rare but may come up if they are SUPER relevant to your proposal.
- You can use the whiteboard to answer questions, but your committee sometimes explicitly says they want you to verbally explain something

- The **timing and number of slides permitted may be limited** by your committee. Ask your committee for their expectations well in advance.
- You **cannot bring notes to your exam**, but you can have your document printed out
- In MCDB, your advisor will NOT be present during the exam. In EE, the advisor will be present but usually can't talk–or rarely, chairs ask the advisor if they wish to ask one question

With this in mind, here are some more quick tips on how you may want to structure your presentation and prepare for the oral exam:

- There should be **more text** than you might usually put in your seminars.
  - Include Aim info in your title
  - What does your expected outcome look like?
  - What does it mean if X happens? What would your next steps look like?
  - What are your controls?
- Including an **outline of your proposal** in the presentation that includes Aims and Subaims is extremely helpful
- Use the presentation to give a summary of your proposal, add information that didn't fit into the prospectus (e.g. a statistical model or conceptual diagram), and incorporate and **highlight any corrections** to your proposal
- Wait until your written proposal is mostly done, or even fully done, to start your presentation. If your written proposal changes a lot, you don't want to waste additional time reorganizing your presentation
- You may have **hidden slides** that you can't fit into your full presentation to help respond to any anticipated questions

Preparing for questions

- Make sure to study any topics that your committee members requested you to!
- If you want, invite a friend to come with you to set up the room on the day of. They can help you to remember to bring your things and to keep you company as you wait
- **Schedule a practice/mock exam** about a week before your exam. Practice giving your presentation and being asked questions by other students. Try not to schedule this too close to the actual exam as it can feel discouraging.
  - Invite 1-2 labmates
  - Invite a person from the lab of each committee member, or someone who has them on their committee
  - Send everyone the proposal beforehand
  - Try to avoid having too many people attend because it's difficult for everyone to ask questions
  - Bring printout copies of our presentation for everyone so they can make notes on your slides or write out questions they weren't able to ask
  - Take notes on the ideas they gave you and any additional areas you can improve on
- Your committee will ask you questions until you reach the limit of your knowledge.
  - This happens to everyone and is expected
  - Be prepared to answer these questions gracefully: "I am not sure, but I think it could be either __ or __. To find out the answer, I would..."
  - Don't BS. Your committee may keep asking your questions about your BS, even if they don't know the answers!

- Most of all, **be confident in the preparation you've done–you got this!**
  - The exam is different for everyone, but have faith: many people hit a rhythm during the exam
  - Just remember you know more about your project than anyone else in the room!
  - This is a conversation. Talk through your thought process; it's okay to say, "I'm think it's either X or Y, and here's how I would find out the answer."

What happens at the exam?

- First, your committee kicks you out of the room and chats for a few minutes, similar to what they do with your committee meetings
- You give your presentation and your committee questions you, usually for between 1.5 to 2 hours for MCDB, or 2.5 hours for EE
- Your committee kicks you out to discuss your performance and votes on the outcome
  - Potential outcomes are pass (conditionally or unconditionally) and fail
  - Online exams: your committee will fill out your evaluation card virtually
  - In-person exams: the committee will fill out the evaluation card that you brought to the room
- You are invited to come back into the room and are given the verdict and feedback.
- Make sure that any paperwork/forms Cathy told you to complete are filled out by all of your committee members and given back to Cathy
- Go and celebrate (sleep).

Evaluation

The committee evaluates you in two ways: the outcome for the exam and the evaluation form that your committee members or committee chair fill out.

- The three potential outcomes of the exam are Unconditional Pass, Conditional Pass, and Fail.
- Unconditional pass
  - You're done! Hooray!
- Conditional pass
  - You still passed! Hooray! There are just one or two things you don't know yet.
  - Your committee decides on what additional work it will request from you and when it needs to happen by
  - Usually no re-examination, but often a written assignment, e.g. a literature review or rethinking an experimental design
  - Conditional passes are not rare, you just passed conditional on finishing an additional task. Usually students actually find it valuable to do the task in the end!
- Fail
  - You will create a revised written document and have a full oral exam
  - Your committee will mentor you, giving detailed feedback and close guidance as you prepare
  - Failure happens, but is rare; usually would only happen if you freeze and can't complete the exam, or if you spend very little time preparing for the exam

The evaluation form is very similar to the rotation and committee report evaluation form. It includes:

- Scoring the following categories with a scale of Outstanding, Above expectations, Meets expectations, Below expectations, and Unsatisfactory:
  - Overall assessment
  - General knowledge
  - Expertise in area of specialization
  - Ability to design experiments
  - Ability to interpret experimental data
  - Written report
  - Oral presentation and defense
- Comments on general and specific knowledge
- Comments on ability to design and interpret experiments
- Comments on written report
- Comments on oral defense
- If performance on any assessment criterion was below expectations, detail the specific requirements that must be completed before reexamination
- If performance was below expectations upon reexamination, detail committee recommendations regarding transfer to MS track
- Reaching consensus and reporting disagreement

Day of your oral exam checklist

- ❑ Check your presentation setup well before the exam starts
- ❑ Bring water and maybe a snack
- ❑ In-person exam: bring markers, eraser, whiteboard spray
- ❑ Pen and blank paper
- ❑ Printed out written proposal for your own reference
- ❑ Laptop and charger
- ❑ HDMI cord and any adapter needed
- ❑ Stop by the office/email to get paperwork/form(s) from Cathy that your committee will fill out
- ❑ Once the exam is done, return paperwork/form(s) to Cathy

ADDING AN EXTERNAL COMMITTEE MEMBER

Besides your three committee members who are faculty in the department, you are required to choose one outside (external) committee member. You do not have to choose an external committee member until **after you have passed your comprehensive exam**. Typically, you can discuss your external committee member options with your PI and you two can work out who you should ask to be on your committee.

Potential criteria for choosing an external committee member:

- Knowledge in your field and your project. This is why many people choose a collaborator as their outside committee member.
- Experience in graduate teaching and mentoring.
- Have a Ph.D. and have experience in being part of a thesis advising committee. Both of these are required by the department.
- Relationship between the potential external committee member and your PI.

The external committee member is no longer required to attend meetings in person, so you can technically choose any faculty you would like to be part of your committee from all around the world. However, a faculty member from outside the university requires approval, so if you want to choose someone who is not a Pitt faculty, just make sure to refer to the departmental grad guide.

Note that it is possible to have more than four committee members on your thesis committee.

The faculty-written grad guide section on external thesis committee members is section 2b ii, and Appendix H.

OVERVIEW MEETING

This meeting is what distinguishes a graduate student from a PhD candidate in the department of Biological Sciences.

Why it's an important milestone:

- It is a requirement for you to graduate and must be held **at least 8 months before your intended defense date**. Thus, you must be a candidate for 8 months to be eligible to defend and graduate.

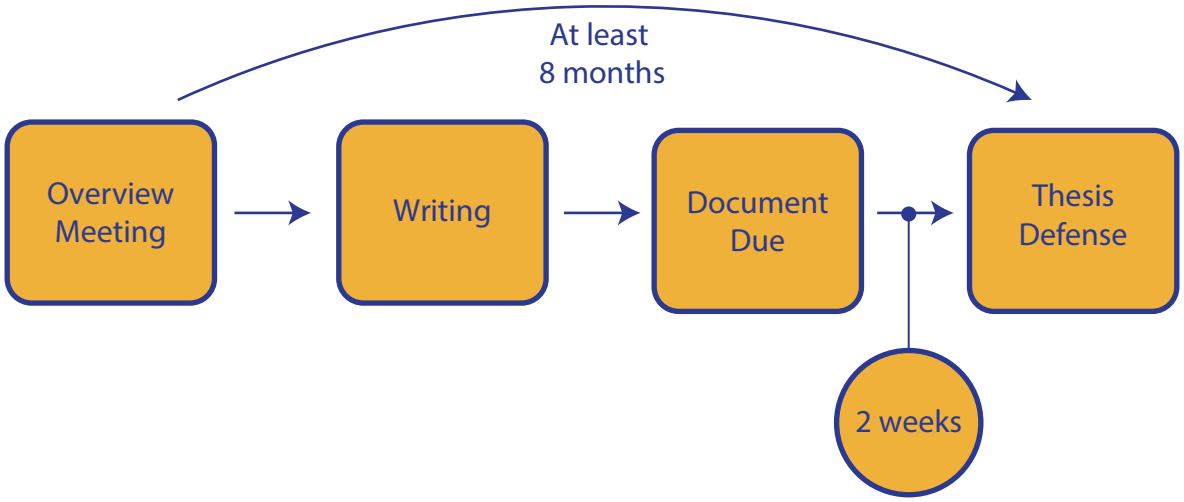
- You officiate your dissertation committee. This means that the committee members selected to attend and be a part of this meeting will be the committee that will sign off on your dissertation and in essence the awarding of your degree. Paperwork identifying your committee is sent to the School of Arts and Sciences. This is part of the officiating process. This means that any changes after the paperwork has been sent will also need to be done at the level of the School of Arts and Sciences and not just in our department.

- It is a meeting that **can be used to outline your dissertation**. Present what you have and ask what Is required for one to graduate.

- It also **qualifies you for opportunities limited to PhD candidates** such as the 3-minute thesis (3MT) competition held school- and university-wide, grants, and fellowships

How to organize and have one:

1. Often you want to have this overview meeting when you have a firm grasp on your dissertation project. This is something you can talk to your PI about. Try to have regular expectations and outcome meetings and pen out a timeline. Typically, we choose to do our committee meetings during the 4th or 5th year, depending on when you plan to defend and whether you (and your PI) think you have a firm grasp of what your thesis will look like.



2. Once you have a good handle on your project and have okayed it with your PI, talk to your committee members about having an overview meeting and get them on board. Also, ask them what they would like you to have at or by said meeting. Knowledge of both will reduce uncomfortable surprises. Once you know what everyone expects, schedule it.
3. The overview meeting does not have to be limited to the afternoon after your noon seminar - although you may find this as the more convenient option since you just gave a talk and they can have your talk fresh in their minds. You can schedule an overview view meeting anytime. Just ask your committee what they would like to see. This might include a powerpoint presentation addressing whatever concerns they have or even showing data you did not share at the noon seminar. This might also include an outline of your thesis
4. Make sure you get the appropriate paperwork from Cathy or admin. Also, share with Cathy your plans about having your overview meeting so she can tell you about any updates or requirements that may have come along since the writing of this guide
5. If you plan on combining your annual meeting with your overview meeting, be sure to have all three necessary documents: thesis prospectus, committee report, and annual report. All three documents are required to be turned in a week ahead, and Cathy Barr must be made aware so that the proper candidacy paperwork can be filled out.

A quick take on responsibilities:

- ❑ Prospectus – This usually involves an outline of your thesis and timeline due **2 weeks before your meeting**
- ❑ Powerpoint presentation
- ❑ Anything else your committee requires
- ❑ Paperwork from Cathy
  (Note: Virtual/hybrid meetings may require additional paperwork so check the department grad guide)
- ❑ Gather all members of your committee, including your outside member. Remember to send reminders, like you do with your usual committee meetings and seminars.

THESIS/DISSERTATION AND DEFENSE

Congratulations on getting to your last milestone in the program! Take a moment to celebrate yourself and think about how far you have come and just how much you deserve this degree. This is just a formality. But, this is also a chance to write up what you the scientist has done, what you have learned and what others can now learn from you. You get to share all of this with the department, the people who you have been presenting to all these years. You will be fine.

Thesis/Dissertation

- This is a graduation requirement. So, **read all of Cathy's emails** and reminders about anything related to dissertation preparation. It is **due to your committee at least 2 weeks ahead of your defense date**.
- **Talk to your PI and come up with an outline**.
- Possibly **share this outline with your committee**. Ask them to critique it. Again, this helps reduce uncomfortable surprises. Use this outline as a guide. Things will probably change as you begin to write, but at least you started with plan and you will see what works and does not work as you go.
- **Get the electronic dissertation template (ETD) for the school of Arts and Sciences**. USE THIS. Do not make up your own formatting. You do not have to. But if you do, the school of Arts and Sciences will remind you of what they find acceptable either way.
- **Attend the ETD workshop closest to the time when you will begin writing**. It's easy to forget, if you attend too early. It's unhelpful if you attend too late, too. The workshop will help you learn about resources you might find useful. Importantly, it will point you to the right ETD template (i.e. an updated version of existing ones- so you might have copies of past dissertations but their format might be outdated). The workshop will also teach you how to use their template. So, by all means necessary- ATTEND this workshop.
- **Develop writing goals and writing schedule**. There is no good way to get the work done without developing a writing schedule that supports your writing or work habits. Make sure the writing schedule has wiggle room for other deadlines you may be trying to meet.
- **Find an accountability partner**. There may be someone also writing their dissertation in the department, outside the department or in the writing clubs hosted by the writing center. Team up and pick writing blocks that work and that you will feel bad about canceling. It is hard to feel bad about canceling a writing block on the weekend.
- **Begin writing in the UPDATED ETD template**. As you write, **talk to your PI** about what you are coming up with and also about how the PI would like to give you feedback. For example, a full draft at least X weeks ahead of your hand in date or chapter by chapter starting X weeks before your hand in date. At this point, you know your PI and their work habits, use your best judgment to smooth your writing process.
- Write. Edit. Repeat.
- Give introduction to readers aside from your PI for feedback if you can.

- **Submit a draft ETD to the D-scholarship when you submit to your committee or as soon as you have a full draft**. Be mindful of deadlines for finals submission of the ETD to D-scholarship for official graduation. The deadline is announced for each semester. Get a draft to D-scholarship (http://d-scholarship.pitt.edu) early enough to get feedback and begin correcting formatting issues when you have time and as you await your comments from your committee.

Defense

This is just the longest noon seminar you will give. Chill-out. You have got this! Here are some of the steps you should take to prepare for your graduation:

1. **Ask Cathy for the paperwork** you need. Also share with Cathy ahead of time when you would like to defend so she can prepare paperwork and remind you if anything administrative you might have forgotten or even never known.
2. **Book a room** for your defense.
3. **Practice with your lab.** It is a long talk and you probably will not want to practice more than twice so prepare for your first practice as if it were your actual talk. This will boost your confidence and reduce fears as you lead up to the defense. On the day, you probably will be nervous. That is fine. Remember the talk itself is an extended noon seminar.
4. After your talk, you will have a **closed door meeting with your committee**. This is the actual defense part. Prepare to be asked questions and receive criticism. It is fine. You made it this far, and what you do not know will not keep you from graduating. Have a fun discussion if you can. Take notes on what they think will make your dissertation better.
5. Congratulations again! Congratulate yourself. Add those three letters to your email signature.
6. Fix the dissertation as needed.
7. Submit your ETD as soon as possible.
8. Submit the paperwork to the School of Arts and Sciences.
9. Wait for your degree in the mail.

TEACHING

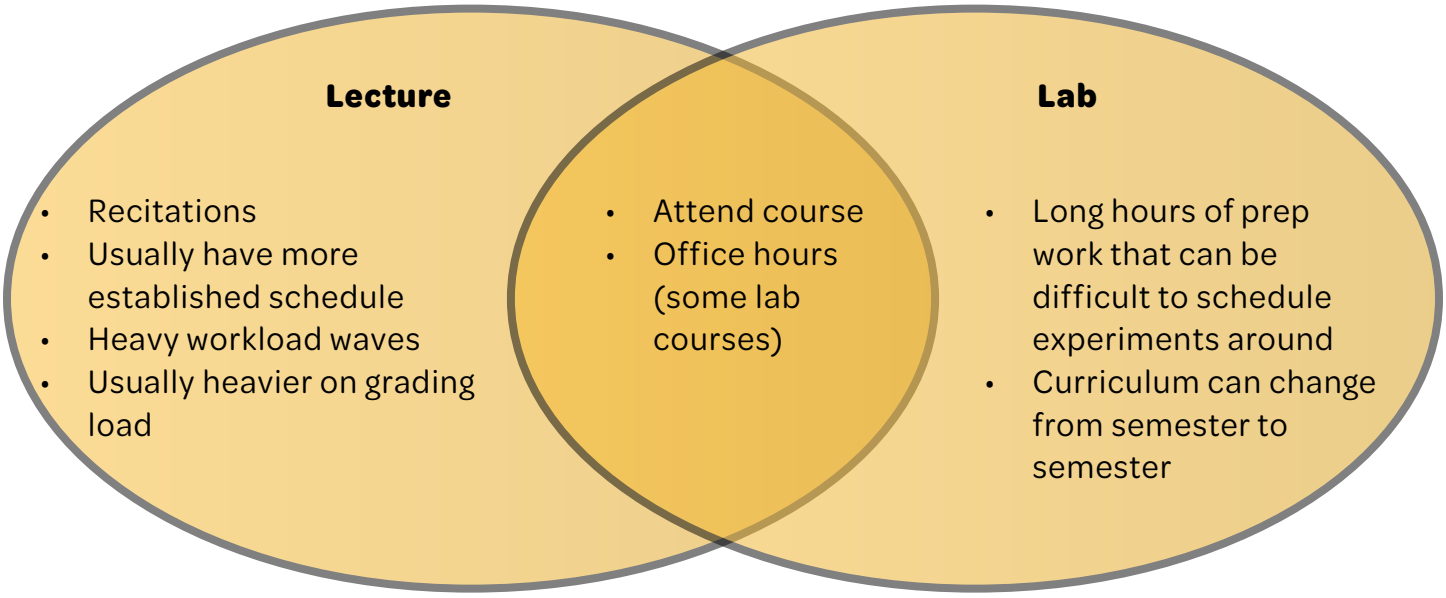
You are **required to teach at least one course** as a graduation requirement. When and **how often you TA can also be dependent on your PI**. Some PIs prefer that their students TA twice during their career or maybe even once an academic year. Some don't have enough funding to support their students. TA training is discussed in the official grad guide, but briefly, it includes an Arts & Sciences training and a Departmental-specific training. The former takes up the entire day, while the latter is a few hours of the day. The paperwork that you sign will tell you that you should be spending no more than 20 hours a week max on TAing. However, this is more like an **average of 20 hours** as some weeks will be busier than others (i.e. exam week vs week after exam). **You are still expected to do lab work and any coursework**.

Appointment process

1. An email call goes out to faculty and students calling for TAs before the academic year. If you need to TA, sign up.
2. You get an email informing you of the course offerings and gives you several prompts.
3. You rank your preferences.
4. You're informed of your appointment. The faculty member teaching the course has some say on who TAs their course. For example, if your PI is teaching a course and you'd like to TA, they can request that you do so.

FAQs

Should I TA a lecture course or a lab course?



What should I do if I end up working more than an average of 20 hours a week regularly on a course?

1. Consistently track your hours to have a record.
2. Talk to your PI about your workload. That way, they know where your time has been going, and they may be able to offer advice on how to proceed.
3. Talk to the instructor that you are TAing for.

What's the difference between a TA and TF?

If you are teaching for the first time, you are considered a TA (Teaching Assistant). If you have taught in the department before, you are considered a TF (Teaching Fellow). There is a difference in pay scale as TFs are paid more than TAs.

What's the pay difference?

There is a pay decrease from GSR to TA because the TA pay is set by the school of Arts and Sciences, not the department.

FELLOWSHIPS, GRANTS, AND AWARDS

Our grads are some of the best in the world, and because of that, they deserve support. We've collected info on some of the most commonly applied for and awarded fellowships in our department and some advice on how to score them.

NIH F31
Due date: 3 cycles/year due in April, August, & December
Citizenship requirements: US citizens/ permanent residents
Funding period: Up to 5 years support
https://researchtraining.nih.gov/programs/fellowships/F31

NSF GRFP
Due date: Mid/late October
Eligibility: Within first/second year of graduate school. Only 1 submission is allowed once in grad school.
Citizenship requirements: US citizens/ permanent residents
Funding period: Three years of financial support
Funding amount: Annual stipend of $37,000 and a cost of education allowance of $12,000 to the institution.
https://www.nsfgrfp.org

USDA NIFA
Due date: Mid-June
Eligibility: Research must be in a "Targeted Expertise Shortage Area" including animal and plant production, forest resources, human nutrition, etc.
Funding period: Three years of funding
https://nifa.usda.gov/funding-opportunity/food-and-agricultural-sciences-national-needs-graduate-and-postgraduate

DoD NDSEG
Due date: Early December
Eligibility: Within first/second year of graduate school. Research must fall within one of the Broad Agency Announcements (BAAs)
Citizenship requirements: US citizens
Funding period: Three years of funding
Funding amount: Monthly stipend ($3,200), up to $1,200 a year in medical insurance, and full tuition
https://www.ndsegfellowships.org

American Heart Association AHA
Due date: Mid-August
Eligibility: Coursework must be complete. You must only be doing research – no teaching.
Funding period: One or two years of support
Funding amount: $25,320 per year, plus $4,200 per year for health insurance. $2,000 per year, in addition to the stipend. (No limit on any line item: travel, computer, equipment, etc.).
https://professional.heart.org/professional/ResearchPrograms/ApplicationInformation/UCM_443316_Predoctoral-Fellowship.jsp

Ford Foundation
Due date: Early December
Eligibility: Members of underrepresented groups in professorship dedicated to pursuing a career in teaching and research
Funding period: Three years of support
Funding amount: Annual stipend: $27,000
Other perks: An invitation to attend the Conference of Ford Fellows
https://sites.nationalacademies.org/PGA/FordFellowships/PGA_171962

GEM Fellowship
Due date: Mid-November
Eligibility: Minority students only
Funding period: Up to five years
Funding amount: $16,000 stipend in the first academic year of the GEM Fellowship. GEM Member University provides a living stipend up to the 5th year of PhD program, equivalent to other funded doctorate students in the department as well as full tuition and fees at a GEM University Member.
Other perks: A minimum of one paid summer internship with a GEM Employer Member
http://www.gemfellowship.org/students/gem-fellowship-program/

AAUW American Fellowship
Due date: Early November
Eligibility: Women only. Must be in the final year of writing her dissertation. Coursework and preliminary exams must be complete.
Citizenship requirements: US citizens/ permanent residents
Funding amount: $20,000 to offset living expenses during dissertation completion
https://www.aauw.org/resources/programs/fellowships-grants/current-opportunities/american-dissertation-fellowship-program/

DoE Computational Science Graduate Fellowship
Due date: Mid-January
Eligibility: First-year graduate students
Citizenship requirements: US citizens/ permanent residents
Funding period: Up to four years
Funding amount: A yearly stipend of $38,000, payment of full tuition and required fees during the appointment period (at any accredited U.S. university), and an annual $1,000 travel allowance
Other perks: 12-week practicum in one of 20 DOE facilities
https://www.krellinst.org/csgf/

HHMI Gilliam Fellowship
Due date: Early January; Requires University nomination (Sept/Oct)
Eligibility: Members of underrepresented groups in science
Funding period: Three years of support
Funding amount: Annual fellow stipend of $33,000, an institution allowance (in lieu of tuition and fees) of $10,000, a fellow educational allowance of $3,000, and an adviser allowance of $4,000 to support diversity and inclusion efforts at the graduate level
https://www.hhmi.org/programs/gilliam-fellows

Cystic Fibrosis Foundation Student Traineeship Award
Due date: End of December
Eligibility: Project must focus on or relate to cystic fibrosis
Funding amount: One-time award of $3,000 to be used for stipend support and/or research costs
https://www.cff.org/researchers/student-traineeship-award

The Smithsonian Institution Fellowship Program (SIFP)
Due date: Early November
Eligibility: Research proposed must be conducted in residence at the Smithsonian Institution in one of its areas of research (outlined in Smithsonian Opportunities for Research and Study)
Funding period: 3 to 12-month term
Funding amount: $36,000 annual stipend and up to $4,000 annual research allowance
https://fellowships.si.edu/opportunity/smithsonian-institution-fellowship-program-sifp

Andrew Mellon Pre-doctoral Fellowship
Due date: Usually December (Look out for

emails from Grad Fellowship and Funding Committee)
Eligibility: All eligible through 4th year
Funding period: 8 to 12 months of support and full tuition scholarship
Funding amount: $23,680 with health care

Fellowships that our grad students have been successful with:

NSF GRFP

Elizabeth Rudzki:
(Awarded prior to beginning doctoral studies)

- Ask for previous applicants' submissions and not just the winners; they may be willing to share the reviewer feedback that they received.
- Sure, your research proposal is important, but it just shows a general "yeah I can propose a solid research plan". You also need to frame it to be relevant to the NSF (i.e. less health-related or anything more in the wheelhouse of the NIH)
- What they care most about is their outreach to those who do not have equal access to STEM. Why is that important to you? Are you part of one of those groups? What experiences have you had? How can you help expand the access to STEM for these groups?
- Customize your personal statement to strongly focus on their mission statement and values. Mention any type of personal scenario that has you as a member of a minority group. Talk about your own experiences, and how you'd help underrepresented minorities.
- Nearly all of the reviewer comments I read from winning proposals said absolutely nothing about their research proposal (other than "looks good" or some other basic comment) and focused entirely on the unique background or experiences the person has had, and the really cool outreach ideas they have
- Common, but totally incorrect assumptions:
  - "The research you propose is something you must do if you are awarded the GRFP." No, They don't care. If you get awarded the fellowship all they want to know is that you are remaining in good standing in your program. This is the case even if you apply as a graduate student, your entire thesis could change and it won't void your fellowship.
  - "The outreach you propose is something you are required to do and finish over the duration of the GRFP." This is technically not the case but you should try to at least do outreach of some type during your PhD. Again, the only requirements for maintaining your NSF GRFP are the GPA requirement and remaining in good standing with your program. However, creating and conducting a great outreach project can also open up opportunities for being featured by the NSF in their newsletter, future fellowships, etc.

Mellon

Jordan Sanders:

- Always remember your audience on this one. Your audience isn't all scientists. They are just other smart people who may not otherwise be scientifically literate.
- Remember that you are "telling a story" to the reader. This was advice that Dr. Jacobson gave me long ago, and I try to keep that in mind. The point of a good story is to start with a clear and important problem that the reader can get on board with, and then work the reader through your logic as your "story" develops.
- I divided my Mellon (at least in my mind) into three sections.
  - The first section was intro to the problem. This section asked, "what is

the scientific problem and why is it important to human well-being?"
    - The second section of my Mellon was what I basically call my "logic" section. It zeroed in more on the specific component of the big picture that my research is focused on. This section described previous data and the implications of the previous data. The point here is to work the reader through your logic as to why you suspect what you suspect. This section concluded with a very concise and specific thesis. "The goal of my research in the next year is to prove X." I think the first two sections are the most important.
    - Third section is your "experimental" section. The goal of this section is to propose 2 or 3 experiments that will answer aspects of your thesis. You will have to propose the protocols you intend to use here too. All I can say here is you need to describe what protocols/ approaches you intend to use at the simplest level. Just make sure that you describe exactly what each method you propose does.
- Remember that the 3-page limit INCLUDES YOUR REFERENCES!

Rachel Bainbridge:

- Instead of focusing most of your energy (and precious page space) on convincing someone who knows your methodology in and out, think about your big picture, what excites you about what you do, and how what you do makes the world better.
- Our department's Grad Fellowship and Funding Committee reviewed and gave feedback to all the applicants, allowing us time to rewrite before the final submission. This made me realize how useful it is to have your work reviewed by someone who either: has a better handle on what the funding board wants than you or has a different perspective on science than you. So in any situation, just ask someone (especially someone not from your lab) to take a look at your draft!

NIH F31

Sarah Sokol Borrelli:

- Start early – these submissions have a lot of components and require documents/ letters of support from collaborators. The earlier you start, the easier it is to make sure you have each component and that each component is strong.
- Take time to read the FOA and identify all of the components that you will need to submit.
- Ask someone who has applied before if they are willing to share their documents with you and ask your PI to share some of their documents with you (for example their vertebrate animals document or biohazards document)
- Be straightforward in addressing potential issues, for example, PIs current funding situation or support from the department. Having a letter of support from the department chair was actually really helpful.

American Heart Association

Deepa Kumari:

- If you have to resubmit, carefully address every single comment and thank them for the positive points, and address the points they found weak
- It is necessary to write the proposal strictly following AHA's instructions and format. The proposal should be precise, logical, and clearly worded.
- The significance of the project (to cardiovascular health) needs to be clear and emphasized well throughout the entire document. I was lucky to have a project that did and all the reviewers noted the high

impact of the project on AHA's mission.
- From my experience, I think all the sections were equally important. Reviewers' comments from both submission and resubmission were very helpful and it seemed they did read the whole application packet well except for a few trivial points they missed.

Wase Tembo:
- I wrote, rewrote, and edited my research proposal for almost a year and got funded on my first submission
- For funding from most organizations but especially very specific ones like the American HEART association–key word being heart means that your project will have to without a doubt related to the cardiovascular system. Same logic goes for say the Parkinson's Disease Foundation and other specific funding bodies–keyword being Parkinson's (whom I sought funding from during undergraduate research).
- Your PI's record is IMPORTANT (unfortunately or fortunately this is factored in the review). You will need the PI's biosketch and all to prove that the lab can support the research you propose. If it is far-fetched get a letter of support from a PI whose lab will definitely align with the mission statement- I got one from a PI who uses blood vessels to conduct research for the AHA application. I also needed his biosketch to support my application.

Pay attention to communications from the Grad Fellowship and Funding Committee!

You can find a list of more fellowships here: https://www.biology.pitt.edu/graduate/enrolled-students/fellowships

FELLOWSHIPS - WHAT TO DO AFTER YOU GET IT

The specification of these actions can change slightly between fellowships so always lean to the side with caution but here are some general tips we have found useful.

First, pat yourself on the back and get at least a few days off. You did well, and you deserve a rest! Really, celebrate because you achieved an awesome thing.

Next, depending on the fellowship -
Internal: You will likely receive a letter to either accept or decline the fellowship. Examples of internal fellowships are the Mellon fellowship, T-32, etc.
External: The Office of Sponsored Research (OSP) will need a copy of your award letter for record keeping and award activation. Examples of external fellowships are NSF GRFP, NIH F-31, AHA Predoctoral fellowship, etc. 1-2 months before the fellowship starts, reach out to people to inquire about details

Tuition

Some fellowships won't cover tuition so you might have to apply to the Dietrich school of Arts & Sciences for scholarships. Others, like the internal Mellon fellowship and T-32, do cover tuition, which is stated in the acceptance letter. Cathy Barr usually sends out emails directly for this prior to the start of the school year. Also note that some fellowships, commonly training grants, will not cover summer tuition. Be sure to confirm if the summer term will be covered by the grant or fellowship, or if your PI will need to cover this term.

Stipend

How many months will the fellowship cover? Start-end date? Will your stipend be the same as before? What is your salary distribution, i.e., how much the fellowship pays and how much your PI will contribute? Sometimes this information is covered in the acceptance letter but if it's not specifically stated, you should reach out to people to confirm these details. Point of contact: Cathy Barr and/or Matt Rager.

Health insurance

If the fellowship covers health insurance, you will have to contact UPMC to reapply for benefits, because your coverage automatically stops once you change your status to a Fellow. This can be done retroactively without your health benefits being affected. It would also be good to figure out if the insurance money will be added to your monthly stipend, or will be paid out-of-pocket and reimbursed later through Concur. Some fellowships do not cover the whole monthly cost of health insurance, so your PI might have to supplement with more funds to cover your medical insurance. Once your fellowship period ends, if it does not coincide with the end of the insurance coverage, you may also need to reapply to health insurance to be covered as GSR. Point of contact: Cathy Barr and/or Matt Rager.

Extra funds for equipment, travel, etc.

If your fellowship covers project support cost, this will likely be assigned an account number from OSP. You can spend this money by reaching out to OSP (https://www.osp.pitt.edu/find-your-office-contact) and providing a justification for the purchase. An account number is also needed.
When in doubt about anything, always contact Cathy Barr and/or whoever your point of contact is, and contact them several times until you get an answer.

ADDITIONAL SOURCES OF INCOME

Quick tips on how to find other sources of income

- Visit the websites of conferences you might want to attend as they may have travel grants and other worthy fellowships
- Visit the websites of foundations/associations of disease relevant to your project
- Talk to your PI, other PIs, and your peers. PIs receive a lot of emails. Maybe one of them will be relevant to your needs
- You can find a position in industry working a few hours a week. Your PI must agree!

Travel Awards

GPSG (Graduate and Professional Student Government) travel grants

- Must include a presentation of some form
- Rolling applications
- Offered through reimbursement basis
- https://gpsg.pitt.edu/services/travel-grants/

Elizabeth Dillon Travel Award

- Funds travel to a conference that the graduate student may not be able to attend otherwise
- A call for applications goes out in the spring

PLE (Pymatuning Laboratory of Ecology) Research Grants and Fellowships

Source: https://www.ple.pitt.edu/research/fellowships-and-grants

PLE Research Grants

- Generally not exceeding $3500
- Spring call

Other sources through our department

Grader

- Typically offered for Foundations sections, they're responsible for grading and entering grades
- Compensation: $1200/section
- Time commitment: ~5 hours/week, 75 hours total
- How to sign up: An email goes out through bio-all seeking grad students, postdocs, etc requesting a CV
- Restrictions on eligibility: Can't be TAing at the time or on fellowship. Can't be an international student

Career Seminar Series Coordinator

- Lead a committee in organizing seminars to introduce careers outside of academia
- Compensation: $2500 distributed over 2 semesters, but you'll be spending 3 semesters working on this
- Time commitment: Heavier in the beginning when you're trying to secure speakers (Summer), but once you have that, the time commitment is 1.5-2 hours on the days of each seminar because of attendance.
- How to sign up: An email goes out near the end of spring semester requesting applications
- Restrictions on eligibility: Can't be TAing at the time or on fellowship. Can't be an international student

Ivy McManus Fellowship

- Mentor the HMB (Hot Metal Bridge) students
- Compensation: $1500/semester
- Time commitment: ~1-2 hours/week
- How to sign up: An email goes out in the spring or summer requesting a CV and letter of application

CAREER DEVELOPMENT OPPORTUNITIES

There are many career development opportunities here, you just need to find the time for them! Below are a few established opportunities, but if you can't find one that you're interested in, you can always start something. Feel free to propose programs to BioSci GSO. You can also establish organizations outside of BioSci (i.e. WISE GSO).

Opportunities within the BioSci Department

Career Seminar Series

This series was established in our department to support students who are interested in careers outside of academia. Seminars are coordinated by graduate students on a volunteer basis and led by a paid (overflow funds) graduate student coordinator. We currently invite about one speaker per month. Because this committee is student-led, the format of this series can change from year to year and could one day include workshops. Speakers who come from fields of interest to our student body talk about their career path, their day-to-day, skills needed, and how students can prepare now. Altogether, this series provides information on different types of careers and networking opportunities.

Biological Sciences GSO (Graduate Student Organization)

All BioSci graduate students are automatically members of the BioSci GSO, though it is a common misconception that it is composed of only its peer-elected members. The board seeks to provide support to the BioSci graduate student community through its peer mentor/mentee program, Q&As, and social events known as BASHes (Biology Afternoon Social Hours). You can learn more about the organization, community, upcoming events, etc here: https://www.biology.pitt.edu/gso. The current peer-elected positions are: President, VP, Treasurer, Secretary, Recruitment Chair, Invited Speakers Chair, Social Chair, Arts and Sciences GSO representatives, and Web Content Editor. Elections usually take place late spring semester every year. **All graduate students may attend meetings.**

Opportunities outside of BioSci, but still at the university

Arts and Sciences Graduate Student Organization (A&S GSO)

Our department is just one of many in the school of Arts and Sciences here at Pitt. The Arts and Sciences GSO meetings occur monthly with representatives from each of the other GSOs in this school with pizza and refreshments. BioSci GSO has 2 representatives that are required to attend, but the meetings are open to anyone who's interested. There are many leadership opportunities, especially within their executive board. But if that's not the type of presence you'd like to have, but still want to be involved, there are various councils that attend meetings with University officials and act as graduate student voices for Arts and Sciences. There are also graduate student committees within the GSO, such as the teaching award committee. In the recent past, a graduate student from our department served as president for a term. You can find more info on their events here: http://pre.asgso.pitt.edu

Graduate and Professional Student Government (GPSG)

At the helm of all graduate student organizations and associations on campus is GPSG. Assembly board members chosen by each school (such as Arts & Sciences GSO) are required to attend monthly assembly board meetings. These meetings are open to all graduate students too. Like A&S GSO, GPSG has various committees such as SAGE (student advocates for graduate education) that you can serve on. There are also opportunities to serve as representatives in Board of Trustee meetings. In the very recent past, a graduate student from our department served as president for two terms. You can find more info on their events here: http://gpsg.pitt.edu

Fourth River Solutions (4RS)

A consulting company that consists of graduate students and postdocs. They take on real projects with real clients. They have cycles of recruitment and also offer events that are open to non-members. You can find more info here: http://www.fourthriversolutions.org

Pitt Innovation Institute

This institute offers events to support startups and encourage entrepreneurship. One of their biggest competitions is the Randall Family Big Idea Competition, but they also host hackathons. Check their website every once in a while to find interesting events: https://www.innovation.pitt.edu

Office of Academic Career Development Health Sciences

They have several programs including job talks. They also have helpful workshops! Check their website for upcoming events: https://www.oacd.health.pitt.edu

Women in Bio Pittsburgh

This group hosts a variety of events including social hours, startup webinars, and other professional workshops. There's also a mentor/mentee program. Find more: https://www.womeninbio.org/page/pittsburgh

Other helpful resources

Versatile PhD

This platform offers helpful webinars to help graduate students transition into non-academic careers. For more: https://versatilephd.com

IDP (Individual Development Plans)

This is a sort of questionnaire that helps you to define your career goals and helps you to identify how to get there. It's something that you fill out as you go. Some labs have already incorporated this into their meetings with their PIs. It is helpful to inform your PI of your career goals so that they can send relevant opportunities your way. https://myidp.sciencecareers.org

MISCELLANEOUS GROUPS

Many labs in our department participate in inter-departmental and/or multi-university meetings. Some of these are listed below. Note: these groups are from pre-2022. They may or may not be still active.

Yeast Meeting

This is a trainee-focused group with attendance from universities across Pittsburgh and beyond. Trainees are encouraged to present. Some of the labs in our department that attend are: Arndt, O'Donnell, Schwacha, Brodsky, and Kaplan. It's an opportunity for trainees to speak, and there are usually two labs that present per meeting, with roughly one talk per lab per academic year. It usually meets Fridays from 3:30-5, once per month.

Chromatin Club

This is typically hosted as mini symposium with attendance from local universities. As such, this is not trainee-focused. Meetings have been coordinated by Drs. Arndt, VanDemark, and Van Houten. As such, their labs attend this symposium as well as Hainer and Kaplan labs. This symposium is, of course, open to other students too.

MELD (Molecular Evolution Lab Discussion)

This is a trainee-focused, friendly group with labs from various universities across Pittsburgh. Rebeiz and Lee labs regularly attend. MELD meets once a month, typically on Thursday at 4. It is usually the fourth/last Thursday of the month.

PITNAC (Pittsburgh Nucleic Acids Club)

This is a trainee-focused, friendly group with labs from various universities across Pittsburgh. Berman, Arndt, and Hainer labs regularly attend. Trainees are encouraged to present, especially on projects where suggestions are invited. Meetings are once a month.

E&E Journal Club

This club meets weekly during the school semesters and includes 4 different journal clubs: Ecology, Evolution, Microbiome, and "Work in Progress" where people share research progress to get advice. There is one meeting for each of these sections every month, and anyone in the EE program faculty, staff, and students are welcome to attend. There's a google sheet to sign up to lead meetings and whoever is leading that week will send out reminders.

Pittsburgh Area Microbial Pathogenesis (PAMP)

A local seminar series by scientists with a passion for pathogens. This meeting has been attended by the Boyle lab. Typically, they are the first Friday of every month at 3:30pm somewhere in the Mellon Institute. Also, they normally have pastries or some other type of baked good!

MetalZoom!

A virtual presentation series featuring work on transition metals across many different specialties of cell and neuroscience. This is a worldwide meeting boasting labs from across the US, Mexico City, and Israel. Frequently attended by the Carlson and Kiselyov labs, this series meets virtually every Monday at 10am.

HELPFUL WORKSHOPS

Research Development

- OSP Research Development: https://www.osp.pitt.edu/research-development
- Health Sciences Library System: https://www.hsls.pitt.edu/instruction/class-catalog
  - Tons of really great options for topics from intro to Photoshop and Illustrator to Intro to R
- The Writing Center: https://www.writingcenter.pitt.edu/graduate-services
- DSA&S Writing Institute: https://www.writinginstitute.pitt.edu/graduate-students
- 3MT (three minute thesis competition) workshop- for PhD candidates only: https://www.asgraduate.pitt.edu/events/three-minute-thesis-preparation-workshop
- Conduct of Research Center workshops on conducting ethical research: https://ctsi.pitt.edu/education-training/responsible-conduct-of-research-training/

Professional Development

- Hesselbein Global Academy leadership workshop: https://www.studentaffairs.pitt.edu/leadership-development/hesselbein-global-academy
- Panther leadership summit: http://www.studentaffairs.pitt.edu/ccld/pls//
- Doctoral and Postdoctoral Career Development workshops: https://www.oacd.health.pitt.edu/professional-development-programs
- Pitt Ventures I-Corps (formerly First Gear): https://www.innovation.pitt.edu/program-navigator/pitt-ventures-i-corps/
- University Teaching center workshop: https://teaching.pitt.edu/workshops-events/
- Outreach workshops: https://www.biology.pitt.edu/k-12-outreach
- Pitt Graduate Studies Professional Development workshops: https://www.gradstudies.pitt.edu/professional-development

Personal Growth and Development

- Pitt Diversity workshops: https://www.diversity.pitt.edu/education
- Pitt Art: https://www.studentaffairs.pitt.edu/pittarts/
- Office of Human Resources workshops: https://www.hr.pitt.edu/current-employees/learning-development/fsdp/diversity
- Personal Finance: https://www.hr.pitt.edu/current-employees/learning-development/fsdp/personal-finance

Other resources

- Center for Research Computing: https://crc.pitt.edu/
- Pittsburgh Supercomputing Center: https://www.psc.edu/

RESOURCES: WHO TO CONTACT

Do you have a question, and you don't know who to ask? While it is always great to talk to your fellow grads, we've put together an index of people who are paid to help you!

Ordering and Shipping

Ordering Supplies
Pat Dean
patdean@pitt.edu
A220 Langley Hall
(412) 624-1137

Genewiz Labels
Dina Condeluci
dec118@pitt.edu
A234 Langley
(412) 624-4266

Shipping
Depends on the lab. Dina Condeluci, Deana Wolkieqicz, and Pat Dean all deal with various aspects.

Administrative

Travel and Conference Expenses
Dina Condeluci
dec118@pitt.edu
A234 Langley
(412) 624-4266

Deanna Wolkiewicz
dmd75@pitt.edu
A234 Langley
(412) 624-4350

Booking rooms
Dina Condeluci
dec118@pitt.edu
A234 Langley
(412) 624-4266

Taxes and pay
Matt Rager
msr53@pitt.edu
A220 Langley Hall
(412)-624-3358

Health insurance (plus dental and vision)
Cathy Barr
cbarr@pitt.edu
A234 Langley
(412) 624-4268

Financial Aid
Lisa Kubick
lisamp@pitt.edu
(412)-624-6095

Teaching and Classes

TA Questions
Valerie Oke
voke@pitt.edu
A230B Langley
(412) 624-4635

Class requirement questions
Cathy Barr
cbarr@pitt.edu
A234 Langley
(412) 624-4268

Fellowships & Grants

Fellowships & grants (Seeking)
Fellowship Committee

Internal fellowships & grants (post-award)
College of Arts and Sciences
asgrad@pitt.edu
5141 Sennott Square

210 S. Bouquet Street
412-624-6094
www.asgraduate.pitt.edu/financial-support/fellowships-internal

Matt Rager
msr53@pitt.edu
A220 Langley Hall
(412)-624-3358

External fellowships & grants (post-award)
Office of Sponsored Research
www.osp.pitt.edu

Vivian Lin
howst2@pitt.edu
(412) 624-5495

Facilities

Card access
Dave Malicki
malicki@pitt.edu
A237 Langley Hall
Office: (412)-624-3975
Cell: (412)-302-3071

Greenhouse
Laurie Follweiler
laf104@pitt.edu
A614 Langley
(412) 432-9760

Microscopy suite access & questions
Chaowei Shang
chs330@pitt.edu
A101 Langley Hall
(412) 624-4448

Information & technology (IT)
Eric Polinko
epolinko@pitt.edu
163 Crawford Hall
(412) 624-0419
www.technology.pitt.edu/247-it-help-desk

Inclusion and advisor concerns

Diversity, equity, and inclusion
CODIE (Committee on Diversity, Equity, & Inclusion)
www.biology.pitt.edu/undergraduate/diversity/assuring-diversity

Advisor issues
Graduate Program Oversight Committee (GPOC) & Director of Graduate Studies (DGAS)

OAKLAND DINING RECOMMENDATIONS

One of the best things about working in Oakland is the wide variety of restaurants within walking distance. Taking a break for meals or for a quick coffee is a great way to give your brain a rest and grab some fresh air. We have compiled a list of our favorite restaurants for quick lunches, to-go, coffee or tea breaks, lunch with a seminar speaker, or a special treat.

Asia Tea House $

Cuisine: Chinese
4230 Forbes Ave
Good for: quick lunch, take-out, bubble tea

CHiKN $$

Cuisine: Nashville hot chicken
3712 Forbes Ave
Good for: Quick lunch, take-out
FYI: Mild is still spicy!

Dunkin' $

Cuisine: Coffee
3907 Forbes Ave
Good for: coffee, breakfast
Meeting room available makes this a great place for small, casual gatherings

Food for Thought $

Cuisine: Deli
196 N Craig Street
Good for: quick lunch, take-out
New York-style deli with sandwiches, soups, and salads

Forbes Street Market

Cuisine: Grocery store
3955 Forbes Ave
Good for: produce, pantry items, deli, bakery

Fuku Tea $

Cuisine: Bubble tea
3800 Forbes Ave
Good for: bubble tea, hot tea

Hello Bistro $

Cuisine: American
3605 Forbes Ave
Good for: quick lunch, take-out, design your own salads, burger options

Korea Garden $$

Cuisine: Korean
414 Semple Street
Good for: lunch, dinner, take-out, karaoke!
Authentic Korean with private karaoke rooms!

Mad Mex $$

Cuisine: Mexican
370 Atwood Street
Good for: dinner, happy hour, meeting room available

The Milk Shake Factory $$

Cuisine: Dessert
3612 Forbes Ave
Good for: milkshakes & chocolate, gifts, dairy-free ice cream

Oishii Bento $

Cuisine: Korean & Japanese
119 Oakland Ave
Good for: quick lunch, take-out

Chick'n and Bubbly $

Cuisine: Korean street food
117 Oakland Ave
Good for: Korean fried chicken, bubble tea

Piada Italian Street Food $

Cuisine: Italian
3600 Forbes Ave
Good for: quick lunch, take-out, design your own
$6 entrée + drink with a student ID weekdays 2-5pm!

The Porch at Schenley $$

Cuisine: American
221 Schenley Drive
Good for: seasonal local ingredients, sit down lunch or dinner
The go-to place for taking seminar speakers to lunch – try the pizza!

Roots Natural Kitchen $

Cuisine: Health food
3610 Forbes Ave
Good for: lunch, take-out, design your own

Sichuan Gourmet $$

Cuisine: Chinese
328 Atwood Street
Good for: lunch, dinner, take-out

Spice Island Tea House $$

Cuisine: Southeast Asian
253 Atwood Street
Good for lunch, dinner, happy hour, take out

Tamarind Flavor of India $$

Cuisine: Indian
257 N Craig St
Good for: sit-down lunch or dinner, vegetarian-friendly
South Indian buffet at a reasonable price

All India Restaurant $$

Cuisine: Indian
315 N Craig St
Good for: sit-down lunch or dinner, vegetarian-friendly
South Indian buffet at a reasonable price at lunch or dinner time

Sushi Fuku $

Cuisine: Japanese
120 Oakland Ave (also at 415 S. Craig St)
Good for: sit-down lunch or dinner

Millie's Homemade Ice Cream $

Cuisine: Dessert
4000 5th Ave
Good for: Grab and go
Great ice cream for both traditional and non-traditional flavors

GRADUATE STUDENT TAXES

What You Need to Know

The information and resources presented below will provide graduate students in our department with the basics of what they need to know when filing their taxes. This information applies to simple tax returns and does not account for other financial involvements such as investments, additional income, and business endeavors outside of the program which would need to be accounted for.

This material has been prepared for informational purposes only, and is not intended to provide, and should not be relied on for tax, legal, or accounting advice. You should consult your own tax, legal, and accounting advisors before filing your tax return. The information was written in Spring 2022 and may not be applicable to future tax periods. All of the below information is subject to change depending on policy changes at the University of Pittsburgh or changes in the federal, state, or local tax code. It is up to the individual to double-check all information for accuracy before filing their taxes.

At the University of Pittsburgh, the taxes you will need to file are dependent upon your job title within the department.

All graduate students should fall under one of the following categories:

Graduate Student Assistant (GSA), Teaching Assistant (TA), or Teaching Fellow (TF):
If your job title is one of the above, the University of Pittsburgh **will withhold** taxes for you throughout the year and you will receive a W-2. Your income is taxable at each of the levels indicated below:

- Federal-taxable
- State (PA)-taxable
- Local (Allegheny County)-taxable

Graduate Student Researcher (GSR):
If your job title is GSR, the University of Pittsburgh **will withhold** taxes for your federal tax return and you will typically receive a W-2. Your income is taxable at each of the levels indicated below:

- Federal-taxable
- State (PA)-non-taxable
- Local (Allegheny County)-non-taxable

Fellow:
If you've been awarded a fellowship (NSF GRFP, Mellon, etc.) that pays your income, the University of Pittsburgh **will not withhold** taxes for you and will not give you a W-2.
Your income is taxable at each of the levels indicated below:

- Federal-taxable
- State (PA)-non-taxable
- Local (Allegheny County)-non-taxable

Tax FAQs:

My tuition is waived. How do I account for this on my tax return?
Waived tuitions are non-taxable at all levels (federal, state, and local) with one exception: if you receive a 1098-T form, pay close attention to boxes 5 and 1. If the value of box 5 is greater than box 1, then the difference is taxable and needs to be reported.

What if taxes aren't withheld?
You need to check your pay statements through PittWorx to determine how much income you need to report. Before the tax year starts, set up estimated payments throughout the year (typically four payments a year) to compensate for this. Failure to do so could lead to a penalty fee at the end of the year when you file your taxes and owe more than $1000. See https://www.irs.gov/businesses/small-businesses-self-employed/estimated-taxes.

What kind of income is a fellowship (such as NIH and NSF)?
External fellowships are typically taxable at the federal level and are considered "unearned income". This should be reported as "other income" on your tax return. Please keep in mind that this information could differ depending on the specific fellowship received.

I am a Graduate Student Researcher and I did not get a W-2, now what?
In this scenario, you will have to check your bank statements to see if anything was withheld. If not, then everything you received is income and this this scenario may be treated the same as if you had a fellowship.

Are all graduate students considered residents of PA?
Not necessarily. If you just moved here you may be considered a partial-year resident and it is important to check residency qualifications before filing. Residency can typically be established by voting in PA or changing your driver's license information.

Pitt is reimbursing me for my health insurance instead of billing the insurance company directly. Is this taxable?
Yes, this is taxable and it often happens when someone has an external fellowship. This needed to be reported as income and the information is sometimes given to you in the form of a 1099-MISC document.

I am married, is it beneficial to me to file separately or jointly?
This depends on the situation but for the majority of people, it is better to file jointly. This is likely the case even if you are on a fellowship. The IRS typically penalizes married people who file separately.

Useful Resources:

- https://www.payroll.pitt.edu/us-tax-information
- https://www.irs.gov/pub/irs-pdf/p970.pdf
- https://www.revenue.pa.gov/FormsandPublications/FormsforIndividuals/PIT/Pages/default.aspx
- http://pfforphds.com/prepare-grad-student-tax-return/

This section could not be written without the help of Jonathan Kok, a licensed CPA who specialized in tax accounting. It was also written with the help of notes taken by Cassie Olmsted during 2022's graduate student tax information session.

HEALTH AND WELLNESS

The university of Pittsburgh offers resources for graduate students to maintain their physical and mental health. Grad school is hard, and it is tempting to let your work get in the way of your health. However, you have to take care of yourself first! After all, your yeast, frogs, bacteria, fish, parasites, and cells can't take care of themselves! They need you at your best. Below is some of the University's resources for health and well-being.

For more info:
https://www.studentaffairs.pitt.edu/shs/

Health services:

The Student Health Service provides appointment and walk-in primary care and immunizations for students enrolled in Pitt.

Medical services include:

- Routine physical examinations and laboratory services
- Vaccinations
- Injury care and physical therapy
- Dermatological evaluation and treatment
- STI testing and treatment
- Male sexual health treatment
- Specialized care for men who have sex with men

The University Pharmacy will fill prescriptions from the Student Health Service or any practitioner (even from out of state).

Most providers have undergone Allies Network Training to support LGBTQIA+ students

Health Services numbers

To make an appointment: 412.383.1800

University Pharmacy: 412.383.1850

Health Insurance:

The department now covers insurance for graduate students through Pitt. This mans the UPMC health insurance premiums are paid for, though dental and vision insurance can be added for a monthly fee. There are also additional co-payments, co-insurance, etc.: https://www.hr.pitt.edu/students/student-health-plans. This is a new plan and there is currently an emergency fund to help students pay for the cost increases: https://www.studentaffairs.pitt.edu/dean/student-emergency-assistance-fund/

If you or someone else is in crisis, call

General mental health: 412.648.7930

Sexual assault response: 412.648.7856

National Suicide Prevention Hotline: 800.273.8255

resolve Crisis Services: 888.796.8226

Trevor Project Hotline: 866.488.7386

Counseling Center:

The University Counseling Center provides services and programs to support students. Drop-in services, crisis intervention, wellness workshops and Let's Talk sessions are provided. For more info, see the Mental Health Services section.

Psychiatry services are now provided through the Student Health Service. However, referral

from a Student Health Service clinician or therapist from the University Counseling Center is required. Services are provided by a board-certified psychiatrist.

Student Health Service doctors can provide services to treat physical problems related to assault and can provide support for interpersonal dating violence. However, SHS doctors cannot perform a forensic medical exam. Please go to the Emergency Department of Magee-Womens Hospital of UPMC (300 Halket Street, 412.641.4933) to see a Sexual Assault Nurse Examiner (SANE) trained to care for patients who have experienced sexual assault or abuse.

Stress Free Zone:

The Stress Free Zone provides a space to learn and practice mindfulness meditation, a technique that teaches evidence-based stress reduction skills. The Stress Free Zone hosts classes and workshops as well as walk-in services. The Zone includes mindfulness audio stations, private meditation and yoga space, biofeedback stations, a massage chair, and daylight lamp therapy. See https://www.studentaffairs.pitt.edu/shs/stressfree/

Other sexual assault resources

University Counseling Center Sexual Assault Coordinator: 412-648-7930

Title IX Coordinator: 412-648-7860

Sexual Harassment and Assault Response and Education: www.SHARE.pitt.edu

Pittsburgh Action Against Rape (PAAR): 1-866-363-7273

University Police: 412-624-212

Image courtesy of Pitt Student Affairs

MENTAL HEALTH SERVICES

Graduate school is difficult, mentally demanding, and wears on you. Stress over time, long hours, and pressure from major milestones can take a toll. It is totally normal to feel lost, confused, frustrated, and needing to seek help.

So you're interested in starting therapy

You have two general options at Pitt. **Firstly, you can attend therapy through the UCC.** In order to be set up with someone long-term, you must do an initial "screening" appointment. In this screening appointment, you will meet with a therapist to discuss what you hope to address in therapy (it could be something specific or even if you're not sure yet, and you just want to feel better mentally, they can help). They will then suggest potential group sessions and/or an individual therapist with the university who has expertise related to your goals. You can also request a therapist of a particular background or identity if that is something that is valuable to you. You can then continue with the recommended therapist for several sessions. These sessions can typically be spaced however you want (weekly, bi-monthly, etc.). These sessions and group sessions are free. While there is no "limit" to your sessions, if you wish to continue therapy long-term after the first six or seven sessions, you will typically be guided towards a community provider. There is a specific group for graduate students among others: https://www.studentaffairs.pitt.edu/counseling/services/group-counseling. Here is a link to FAQs for the UCC: https://www.studentaffairs.pitt.edu/counseling/frequently-asked-questions

Your second option would be to seek out a community provider initially (who takes our insurance) based on recommendations (from other grad students, from the internet, or from that initial screening session). You will have to pay a $30 co-pay per session with Pitt insurance (provided they're in-network), but you likely won't need to switch therapists if you think a long-term arrangement could be best for you. You can also do group sessions while doing sessions with a community provider if you think that would be beneficial. The staff in the counseling center typically helps you find group sessions where the members have little overlap with your department.

It is also possible to get referred to an off-campus, licensed mental health clinician using the online directory, Thriving Campus. You can search using specific characteristics, such as specialties, race, gender, techniques, and location. You can also find guides and resources to help you through the process of securing off-campus outpatient care.

Find the directory here: pitt.thrivingcampus.com

Additionally, Pitt has access to TAO or the Therapy Assistance Online, an online library where you can find various modules and activities to help with self-awareness and other mental health goals: www.studentaffairs.pitt.edu/cc/therapy-assistance-online/

Lastly, for more resources, try: yfrp.pitt.edu/resources/services-and-support/resources-adhd-other-mental-health-services/mental-health-services

PARENT AND CHILDCARE RESOURCES

Are you having or adopting a child while in grad school? Our department offers different resources for parents. Overall, graduate students are guaranteed 8 weeks off following the birth or adoption of their child. This time off includes time off from classes and research along with the option to change seminar dates if it falls in this 8 week timeframe. It is also important to talk to your PI about their expectations during this time and leading up to your leave.

Within the department, there is a form to fill out that gets sent to both the Chair of the department, and the current Director of Graduate Studies. Their signatures are needed: https://www.publichealth.pitt.edu/Portals/0/Main/Academics/Forms/Request%20For%20Graduate%20Student%20Parental%20Accomodation%20Form_Rev.nd.pdf?ver=2013-09-06-140423-000

Pitt has a set of guidelines for meeting the accommodations, and that information can be found here: https://www.gradstudies.pitt.edu/sites/default/files/assets/GradParentalAccommGuidelines6-1-22.pdf

There are lactation rooms across campus with one being in the BioSci complex on the ground floor of Clapp Hall: https://www.diversity.pitt.edu/diverse-populations/lactation-rooms

The University of Pittsburgh offers childcare. There are two (very long) waitlists that exist: one for part-time child care (2-3 full days per week) and another for full-time child care (five full days per week). There is a $15.00 non-refundable fee to get on the waitlist, and an Enrollment Card can be obtained by emailing Melissa Barr at mcb135@pitt.edu.

Additional Resources:

- City of Pittsburgh resources for finding affordable childcare: https://tryingtogether.org/
- Childcare locator on the PA state website: https://www.education.pa.gov/Early%20Learning/Keystone%20Stars/Pages/default.aspx
- Angel's Place has free daycare for single, low-income parents who are students: https://www.angelsplacepgh.org/
- Childcare information in the times of COVID-19: https://www.hr.pitt.edu/news/covid-19-childcare-resources
- Option through UPMC for parents who have a sick child that will not be accepted at daycare ($80/day for the public but can be reduced): https://www.upmc.com/locations/hospitals/magee/about-us/childrens-center/get-well-room
- Adding a child to the student insurance plan: https://www.hr.pitt.edu/students/graduate-plan
- Children's Health Insurance Program (CHIP) in Pennsylvania: https://www.dhs.pa.gov/CHIP/Pages/CHIP.aspx
- National Science Foundation: Career Life Balance: https://www.nsf.gov/career-life-balance/
- National Institutes of Health: https://grants.nih.gov/grants/policy/nih-family-friendly-initiative.htm

People to email the letters to start the process within Pitt are:

- Culpepper, Meghan Shane msc80@pitt.edu (Academic Affairs Coordinator)
- Cc Carter, Philippa K pkc3@pitt.edu
- Cc Rosol, Jason M jmr6@pitt.edu

HOUSING INFORMATION

This information was gathered through a survey sent out to the BioSci grad students in 2022. The majority of respondents rented their housing, lived in a housing situation with separate units and entrances, had roommates, and owned pets. Below are details about housing situations in various neighbors in and around Pittsburgh. Rents represented here are total rents and some of these are split among roommates or over a household. These numbers are just meant to give you a sense of what the average total rent is for an apartment/house in these areas.

Rental fees for pets were harder to capture within the general framework surveyed. These fees can vary based on what rental company you are renting from, whether they are a one-time deposit vs. a monthly rental fee (or some combination of these), and which type of pet is part of your family. Some summary points are some apartment companies require a one-time deposit between $100-$600 dollars, and some companies have a $25-$75 monthly fee. There were also some companies/landlords that didn't require any additional payments but having a pet will on average increase your rental costs.

Neighborhoods:

Baldwin/Brentwood:
Number of students who live there: 1
Average Mortgage: $650
Average Rent: NA
Pet Friendly: Yes
Family Friendly: Yes
Handicap Accessible: No
Recommended rental companies: NA
Not recommended companies: Mozart management

Lawrenceville:
Number of students who live there: 1
Average Mortgage: NA
Average Rent: $750
Pet Friendly: Yes
Family Friendly: Yes
Handicap Accessible: No
Recommended rental companies: NA
Not recommended companies: Mozart management

Downtown:
Number of students who live there: 1
Average Mortgage: NA
Average Rent: $1685
Pet Friendly: Yes
Family Friendly: No
Handicap Accessible: No
Recommended rental companies: NA
Not recommended companies: Greystar

East Liberty:
Number of students who live there: 2
Average Mortgage: NA
Average Rent: $827 (Range $754-$900)
Pet Friendly: No
Family Friendly: No
Handicap Accessible: No
Recommended rental companies: MJ Kelly Realty
Not recommended companies: NA

Edgewood:
Number of students who live there: 1
Average Mortgage: NA
Average Rent: $820
Pet Friendly: Yes
Family Friendly: Yes
Handicap Accessible: No
Recommended rental companies: Steiner Realty
Not recommended companies: NA

Friendship:
Number of students who live there: 2
Average Mortgage: NA
Average Rent: $1225 (Range $850-$1600)
Pet Friendly: Yes
Family Friendly: Yes
Handicap Accessible: No
Recommended rental companies: Nexus realty
Not recommended companies: Mozart management

Greenfield:
Number of students who live there: 1
Average Mortgage: NA
Average Rent: $625
Pet Friendly: No
Family Friendly: Yes
Handicap Accessible: Partially
Recommended rental companies: McQuarters Reality
Not recommended companies: NA

Highland Park:
Number of students who live there: 1
Average Mortgage: NA
Average Rent: $840
Pet Friendly: Yes
Family Friendly: Yes
Handicap Accessible: No
Recommended rental companies: NA
Not recommended companies: NA

Oakland:
Number of students who live there: 2
Average Mortgage: NA
Average Rent: $1190 ($880-$1500)
Pet Friendly: No
Family Friendly: No
Handicap Accessible: Some places, yes
Recommended rental companies: Union Real Estate, Beacon Communities
Not recommended companies: NA

Northview Heights:
Number of students who live there: 1
Average Mortgage: NA
Average Rent: $1000
Pet Friendly: Yes
Family Friendly: Yes
Handicap Accessible: No
Recommended rental companies: NA
Not recommended companies: NA

Wilkinsburg:
Number of students who live there: 1
Average Mortgage: NA
Average Rent: $955
Pet Friendly: Yes
Family Friendly: No
Handicap Accessible: No
Recommended rental companies: Regent Square rentals
Not recommended companies: NA

Penn Hills:
Number of students who live there: 1
Average Mortgage: $1050
Average Rent: NA
Pet Friendly: No
Family Friendly: No

Handicap Accessible: No
Recommended rental companies: NA
Not recommended companies: NA

Shadyside:
Number of students who live there: 5
Average Mortgage: NA
Average Rent: $1188 ($670-$1815)
Pet Friendly: Yes
Family Friendly: Yes
Handicap Accessible: No
Recommended rental companies: JJ Land Co., Valinsky Reality, Charles J. Greve & Co., Meyers Management, Union real estate
Not recommended companies: NA

Squirrel Hill:
Number of students who live there: 4
Average Mortgage: NA
Average Rent: $1081 ($800-$1375)
Pet Friendly: Yes
Family Friendly: Yes
Handicap Accessible: Yes
Recommended rental companies: Private landlords in the area, AMK Rentals and property management, Lobos
Not recommended companies: NA

Troy Hill:
Number of students who live there: 1
Average Mortgage: NA
Average Rent: $400
Pet Friendly: No
Family Friendly: No
Handicap Accessible: No
Recommended rental companies: NA
Not recommended companies: NA

Bon Air:
Number of students who live there: 1
Average Mortgage: NA
Average Rent: $1,300
Pet Friendly: Yes
Family Friendly: Yes
Handicap Accessible: No
Recommended rental companies: NA
Not recommended companies: NA

Forest Hills:
Number of students who live there: 1
Average Mortgage: $1500
Average Rent: NA
Pet Friendly: Yes
Family Friendly: Yes
Handicap Accessible: No
Recommended rental companies: MJ Kelly Realty
Not recommended companies: NA