MARCH 2020

A GUIDE TO SURVIVE

Penn Engineering

Presented by:

Engineering Deans' Advisory Board

How to Save Money on Textbooks

When should I get my textbooks?

While it is tempting to purchase required course material at the very beginning of this semester, students should wait until the first week of school when their schedules are finalized before buying textbooks. This way, students do not risk the hassle or possible late fees of having to return unneeded textbooks.

Which textbooks should I get?

Many course syllabi list both required and supplemental textbooks. To avoid unnecessary expenses, it is a good idea for students to start off with only the required textbook(s) and purchase supplemental resources as they see fit during the semester. Supplemental textbooks are useful when a student is struggling with understanding a textbook and feels as though an additional perspective would be enlightening.

What are the best ways to buy a textbook?

Before purchasing any course textbooks, it is always helpful to reach out to peers who have previously taken the course for insight into what textbooks are useful and see if you can borrow any. It is also worth it to see if the textbook is available for free legal download online, as is sometimes the case. If neither of these paths is fruitful, students can either rent or purchase textbooks.

Renting textbooks is a great way to save money, reduce clutter from unused past textbooks, and help the environment. Most students rent textbooks from the Penn Bookstore or Amazon.

Purchasing textbooks can easily cost hundreds of dollars a semester. Students should consider purchasing digital or used copies of textbooks to reduce costs. The most common places to purchase textbooks are from the Penn Bookstore and Amazon. There are also some Facebook groups where college students sell new/used textbooks, but make sure the Facebook group is legit and reliable.

How to Survive Late Nights and All-Nighters

Remember that all-nighters can have consequences past just the next day; lack of sleep is tied to a wide variety of long term health issues. When you have an assignment due-date or exam coming up, spend some time **planning a study/work schedule well in advance.**

However, things don't always go as planned and you may find yourself way behind your intended schedule. If this is the case, consider checking your course's extension policies or reach out to your professor to see if getting an extension is possible. **Students should only pull all-nighters as a last resort**. If you do find yourself needing to pull an all-nighter, these tips will be handy:

- **Set a goal for the night**. Having a clear objective and plan is helpful for directing your efforts.
- **Turn up the light**. Even though bright lights can be unpleasant when tired, it has an alerting effect on the body. It can also be beneficial to turn off screen-softening applications.
- **Drink coffee or caffeinated beverages**. Strategically timing caffeine consumption can help improve performance. A good strategy for those early morning hours is to take your caffeine and then nap for 30 minutes; caffeine kicks in after 15-30 minutes. Remember that caffeine only masks sleepiness, so expect a crash when it wears off.
- **Hydrate!** Staying hydrated can help you stay awake and make the next day easier.
- **Eat healthy and hearty snacks** during the night to stay energized.
- **Study in groups**. Working with friends can help keep you focused and motivated. It is also useful to be able to bounce ideas and questions off peers.
- **Know your limitations**. If you find yourself feeling unwell or extremely fatigued while pulling an all-nighter, it is best to go to sleep or at least take a nap. Doing poorly on one homework assignment at the expense of your health is not worth it, especially if it's an assignment that won't make or break your grade.
- **Penn Walk**: If you need to go back to your dorm or house late at night, don't walk alone. Penn Police walking escorts are available 24/7. Just call (215) 898-WALK or 511 (from a campus phone). More information can be found here: https://www.publicsafety.upenn.edu/about/security-services/walking-escort/

How to Recover from a Bombed Exam

Doing poorly on an exam is not the end of the world or your academic career. Remember that every student eventually bombs an exam; those who succeed academically are those who know how to recover from this situation.

Where do I start?

Start by reviewing the exam. When it is returned to you, go through the feedback and try to understand what you did incorrectly. Professors often provide solutions post-exam for you to compare your work with. If not, ask a classmate if you can compare your answers with theirs.

Who should I talk to?

The first person you should talk to is the professor. Even if the professor has open office hours, it is worth it to email them in case they prefer to review exams in private meetings. Sometimes, the professor will refer you to a TA instead.

Make sure you are ready to discuss your mistakes; being unprepared for a meeting to discuss an exam that went poorly is not a good look. Good topics to bring up during these meetings include (but are not limited to):

- Point deductions that are unclear to you
- Concepts/questions that you do not understand
- Techniques you used when studying for the exam
- How to make up points in other areas

Remember that being respectful and honest will get you a long way.

How to be better prepared for an exam in the future?

Figuring out new and effective methods to prepare for exams will come from your conversation with your professor/TA. Some good baseline techniques are attending class regularly, starting homeworks earlier, studying for exams well in advance, and being engaged in class by asking and answering questions. It can also be useful to speak with peers who did well to see what they did to prepare for the exam.

How to make up points in other areas?

Most courses have assignments other than exams. When trying to recover from a poor exam performance, it is imperative that you do well on other assessments. Professors/TAs are more likely to help the grades of students who are engaged in office hours and class as opposed to those who show up last minute for a grade boost.

How to Print from Engineering

Every semester, SEAS students receive a $20 printing credit. More credit can be purchased using PennCash. Keep in mind that printing credit rolls over to the next semester if any is remaining at the end of a semester. For black and white printing, single-sided printing costs $0.07 per page and double-sided printing costs $0.10 per page. For color printing, single-sided printing costs $0.28 per page and double-sided printing costs $0.40 per page.

There are three main release stations where you can use this Pay-To-Print Policy: M62 Towne, M70 Towne, and Moore 100.

How to Find Mental Health Resources

Counseling and Psychological Services (CAPS)

CAPS offers confidential free professional mental health services. They aim to assist students in their adjustment to university life and help them take full advantage of the academic and social environment at Penn. Never hesitate to take a friend or reach out yourself!

CAPS is located at **3624 Market Street** for in-person visits, however students have the ability to talk to a clinician 24/7 by simple calling **(215) 898-7021** and selecting 1 on the main menu. More information can be found here: https://osa.vpul.upenn.edu/

Reach-a-Peer Helpline (RAP)

RAP gives students a safe, comfortable, and judgment-free space to speak (or write) about anything. RAP Helpline listeners are well-trained and aim to give objective, undivided attention. No problem is too large OR too small to call RAP, and you can talk as little or as long as you'd like.

You can reach the RAP Helpline at **(215) 573-2727.**

Penn Benjamins

Penn Benjamins offers confidential peer-to-peer talking and referral services to any member of the Penn undergraduate community.

More information can be found here: https://pennbenjamins.weebly.com

PROFESSIONAL DEVELOPMENT

Overview

Professional development is ingrained in many aspects of Penn culture and is helpful for your time at Penn and beyond. Professional development encompasses a wide range of activities, from developing your personal brand to refining your career and academic aspirations. Because this process is unique to each individual, there are plenty of resources available to help everyone not only achieve their professional goals, but also discover their ideal career path from the beginning. Below you will find the typical route that most students take in professional development throughout the year; treat this only as a template and baseline to help guide your desired personal growth. Everyone's path **is** and **should be** different!

During the typical academic year, it may seem difficult or daunting to focus on professional development in addition to your classes. Viewing the process as a complement to everything you normally do to succeed academically will help motivate you to stay engaged, organized, and informed. Here are some of the main tasks and events you can devote time to during the year:

Career and Research Fairs

Penn hosts many different events targeted towards pursuing career opportunities, including but not limited to internships, new graduate full-time roles, fellowships, etc. A majority of these events comprise of employers or research labs gathering at a particular location on campus or at the Sheraton, giving students the opportunity to chat with employers, drop off resumes, and ask questions. At these events, employer representatives are often Penn alumni working at that company or research lab.

A great resource to find upcoming career and research fairs is the Penn Career Services website and Handshake, which have lists of upcoming events along with forms that allow you to register for them if necessary. Dress codes vary between different events, so be sure to read the event description carefully.

Typically, employers and labs do not officially hire students at career or research fairs, and rather use these events to get to know prospective employees and answer questions. That said, it is recommended that you go to the fairs prepared with a list of potential companies or labs you may be interested in (attendees can usually be found on the event listing), along with a resume or sample of your work.

Networking

While there are mixed opinions on the word, the concept of networking is important. Connecting with other students, professors, companies, and employees keeps you informed about opportunities and extends your social circles.

Meeting with other students outside of class is a great way to become more involved in the Penn community, but meeting with professors and industry professionals can be harder and less natural. Don't hesitate to directly reach out to professors with interesting research, companies that operate in your industry of interest, or recruiters for your favorite firms. Directness, honesty, and openness go a long way, and shooting your shot is the first step in achieving your goals.

Guest Speakers & Conferences

Penn clubs, schools, and societies regularly host events that bring guest speakers to talk to students about specific topics. These are often branded as "fireside chats" and you can typically find events being advertised on Facebook or newsletters, especially on the official pages of organizations.

These are really great events to learn from an expert and opportunities for easy introductions with the guests – just go over to them and say hello after the event! These are also a great way to meet people with similar interests and meet representatives of the organizing school or club.

Engineering Classes

As engineering students, many of you are probably interested in engineering careers after graduation. While classes themselves may seem separate from your post-graduation career, they are truly vital in developing your skill set and refining your interests.

SEAS offers many engineering classes that are both outside of your requirements and outside of your intended major, and you are highly encouraged to explore these classes if you have the availability to do so! Find all listed courses here (https://catalog.upenn.edu/courses/), and spend some time looking into classes that are outside of your comfort zone.

Undergraduate Research

What is Undergraduate Research?

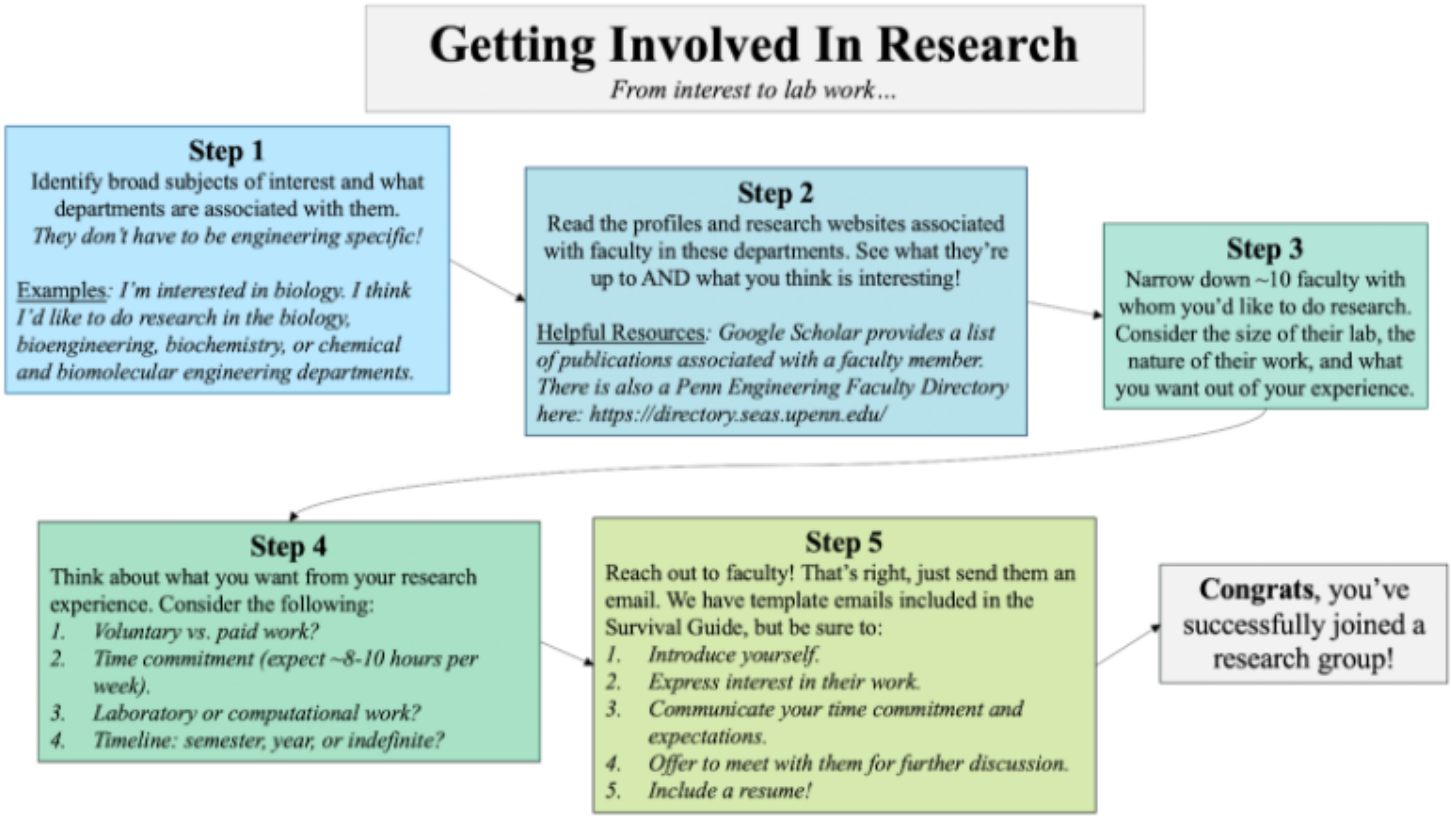
Undergraduate research typically involves an undergraduate student working with a professor, Ph.D. student, or Post-Doctoral scholar on a research project. This means that your research mentor will teach you valuable laboratory, computational, or theoretical skills in return for your assistance on a project. The subject of the project is dependent on what lab you join--some professors have a narrow focus while others pursue a broad range of projects. It's easy to feel intimidated, but the expectation of most professors is that their undergraduate research assistants have no prior background in their field of study. Undergraduate research is just as much a mentoring process as it is a tangible contribution to discovering new knowledge in a given field.

Why Research?

Research experience supplements your classroom education.
Research teaches you what sort of problems can be solved by your major.
Research allows you to foster strong relationships with faculty and graduate students.
Research is a fantastic experience for professional development.Engineering research inevitably yields dividends.

Reaching out to Faculty

Contacting faculty out of the blue can feel awkward, and it's something that most people don't have experience doing. However, there's no other way that you're going to join the lab of a professor doing research that interests you. Try using the following email template as a starting point for reaching out to faculty of interest! You don't need to stick to the script exactly; feel free to add personal details and any information that might be relevant to your professor.



Email Template

Dear [PROFESSOR NAME HERE],

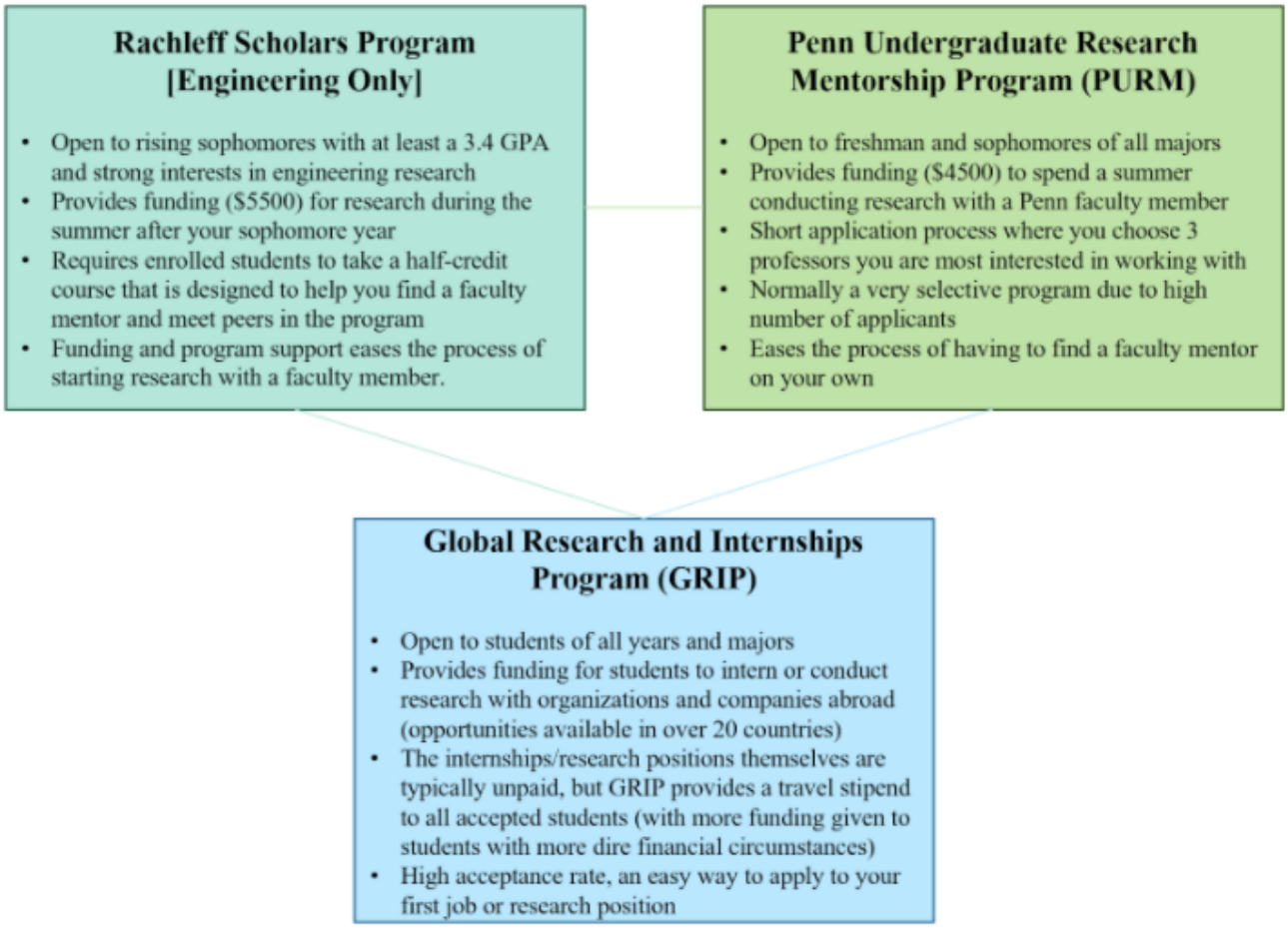
I am a [FRESHMAN, SOPHOMORE, ETC] at the University of Pennsylvania studying [MAJOR]. I have taken an interest into research in your lab, specifically your work with [INSERT SOMETHING YOU LIKE ABOUT THEIR RESEARCH], and I am interested in working on a project in your lab during the upcoming semester. I would enjoy learning more about your work in [FIELD OF STUDY]. I have attached a resume below and would love to discuss opportunities in the future when the next semester begins.

Thank you for your time,

[YOUR NAME]

Research Programs and Funding

In addition to getting involved with professors through their labs, there are a variety of programs that can either set you up with faculty or provide you funding. Here are some major examples at Penn and in Penn Engineering:



Having funding for research ahead of time can also make a professor more inclined to take you on for a research project. There are plenty of research funding opportunities available to engineering specifically located here: https://research.seas.upenn.edu/undergraduate-research/ (in addition to PURM and the Rachleff Scholars) and funding can also be achieved through CURF: https://www.curf.upenn.edu/research/funding-opportunities. One that is particularly useful, if you've already established a relationship with a faculty member, is the CURF Faculty Mentorship Grant. It's a similar program to PURM but with a greater likelihood of receiving funding.

If you've done research before and are considering a career in the field, there are pretty fantastic opportunities to boost your credentials. Fellowship information can be found here: https://www.curf.upenn.edu/fellowships. In addition, the NSF funds Research Experience for Undergraduates (REUs) that allow you to do research at other academic institutions. Find more information about that here: https://www.nsf.gov/crssprgm/reu/. Both of these tools can serve to pad a graduate school application down the road, in addition to expanding your research portfolio.

Internships

Timeline

1. First Year
    a. Attend campus career fairs
    b. Join organizations on campus
    c. Connect with Career Services
    d. Update resume
2. Sophomore/Junior
    a. Attend campus career fairs
    b. Attend recruiting activities
    c. Attend Career Services workshops
    d. Update resume
    e. Start building a professional network
    f. Practice interviewing skills
    g. Start job search
3. Senior Year
    a. Continue job search
    b. Attend recruiting events
    c. Continue building a professional network

The recruitment timeline for different industries, companies, and positions are highly variable. For some industries (investment banking, consulting, private equity, venture capital, etc.), the recruitment process for a summer internship can be as early as one and a half years before the internship begins.

For other industries (software engineering, electrical engineering, etc.) the process may begin as the school year starts. As a rule of thumb, to be prepared for whatever the timeline is, you should research the companies and industries that interest you as early as possible. Keep tabs on the positions that interest you so that you can be prepared to apply for these internships, especially in your later college years where internships are viewed as more important.

It is never too early to put the time into researching your career beyond college, and that research naturally begins with a focus on the internship timeline.

Resources

Your largest resource is undeniably your fellow peers at Penn! Many students go through the internship and recruitment process in similar ways. Always feel comfortable with talking to your classmates about opportunities, and never be afraid to ask for advice from people informed about the process.

The Penn Career Services website and Handshake are helpful in connecting you to advisors and opportunities. From providing resume and cover letter tips to informing you of upcoming recruitment information sessions, these two resources are often forgotten. Take advantage of them!

Plenty of resources exist online to help you with recruitment, but usually at a cost. Try to exhaust all resources at Penn before looking outside of the school in hopes of finding the secret tip that will help you land a job offer. If you do look outside of Penn for interview books or recruitment guides, be sure to research which resources are best suited for your interests and questions.

Interviews

Interviews are an intermediary event in between your application to a position and an offer from a company. Interviews are very different and highly dependent on the industry, company, and even the interviewer you get that day. Generally, it consists of a recruiter or employee that asks you a mix of behavioral and technical questions related to the role you are applying in. Sometimes, companies will have multiple rounds of interviews that progress in difficulty and selectivity, while others may employ group interviewing or virtual interviewing. There are some common tips to guide your preparation for the process, regardless of the approach the company takes.

Firstly, research the company and the role you are applying for. Interest in the company and the role should be matched with an understanding of the company, what they do, and the responsibilities of the role. Don't just look at the first page of google results, truly do research on the company and leverage your network to get a deeper understanding of what happens behind the scenes. Not only will this knowledge add an element of sophistication to your interview, but it will help you realize if this role is truly the right fit for you.