

## **The Unofficial EGSA Handbook: For Students, By Students**

Handbook prepared by students of the  
Entomological Graduate Student Association (EGSA)

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## **Introduction**

Welcome to Penn State!

This is an unofficial handbook written for students, by students of the Entomological Graduate Student Association (EGSA). Our goal was to make a comprehensive guide that students can use as a reference throughout their time at Penn State, whether they are just moving in, studying for their candidacy or comprehensive exam, or getting ready to defend and take the next step.

We hope that this handbook will help you make the most out of your time at Penn State and prepare you for a successful future.

Good luck, and do incredible things!

From,

Your fellow graduate students

## **Part 1: Getting Started at Penn State**

The Pennsylvania State University is the largest public land-grant university in Pennsylvania. The main campus is the University Park campus, located in State College. There are also 23 additional satellite campuses located throughout Pennsylvania.

The Department of Entomology is based in University Park, with the main office on the 5th floor of the Agricultural Sciences (ASI) building. The 5th floor of ASI is the hub of all departmental activity, though there are many department faculty and labs scattered across different buildings on the University Park campus, including the Millennium Science Complex, Mueller, Merkel, the Chemical Ecology Lab (CEL), and the Frost Entomological Museum.

### **Getting to Know State College**

State College is a beautiful college town surrounded by farmland, forests and mountains, the tallest of which is Mt. Nittany. State College is located in Centre County, which is appropriately named because it is in the center of Pennsylvania. State College and the surrounding area is known as “Happy Valley”.

Here are some things to know about the area:

#### **History**

Originally home to several Native American tribes, including the Delaware, Shawnee, Mingo, and the Iroquois, European settlers first colonized the area in the seventeenth century. Settlers soon realized that the area was rich in high-quality iron ore, and furnaces popped up all over Pennsylvania to process the ore. The Centre Furnace was started in 1792 and produced iron until 1858 (the remains of the furnace are still visible on College Avenue today). With the decline of the iron industry, the owner of the Centre Furnace, General James Irvin, and the ironmaster, Miles Thomson, offered land to the Agricultural Society of Pennsylvania to build a school for the purpose of agricultural education and improvement. The Farmers' High School of Pennsylvania was founded on February 22nd, 1855, and later became The Pennsylvania State University.

## Weather

Summers are humid and pleasant, with temperatures usually between 70–80°F (around 21–27°C) during the day and 60–70°F (around 15–21°C) at night, though daytime temperatures occasionally go over 90°F (over 32°C).

Winters are very cold; the temperature is usually in the teens or twenties (between -12 and -6°C), but it can and does go lower. Get some proper winter clothing and be prepared to occasionally walk to school in -20°F (-28.9°C) weather. The surrounding mountains usually protect the valley from heavy snowfall, so cancellations due to winter weather are rare.

## Population number and breakdown

The population of State College was 42,034 according to the 2010 census, but the population increases dramatically during the school year. There were 40,742 undergraduates enrolled at the University Park Campus for the 2015–2016 school year (<http://admissions.psu.edu/apply/statistics/>). The population rises even more during football game weekends, with thousands of alumni and fans coming to visit. The town and roadways can get very crowded, so plan accordingly during game weekends!

There are many things to see and do around the central Pennsylvania area, such as visiting Gettysburg and Hershey Park. State College is also within driving distance of several major cities including Philadelphia, Pittsburgh, New York City, and Washington D.C.

The State College-Centre Region is a bronze level Bicycle Friendly Community recognized by the League of American Bicyclists and has received a silver recognition from the League for its Bicycle Friendly Business program. There are many bike trails you can explore.

To learn more about State College and Centre County, you can check out the websites here:

- State College.com: <http://www.statecollege.com/>
- Central Pennsylvania Convention and Visitor's Bureau: <http://www.visitpennstate.org/>
- Centre County Government: <http://centrecountypa.gov/>
- Centre Daily Times Newspaper: <http://www.centredaily.com/>

## Housing and Neighborhoods

During departmental recruitment week, all attendees tour the homes of current graduate students to see different places to live. Most students live in State College or nearby surrounding towns such as Lemont, Boalsburg, and Port Matilda.

There are options for renting houses. You can often find listings advertised on Craigslist, but be aware of potential scams (scammers will try to pressure you into sending them money ahead of time using Western Union, etc. Never send money!).

There are also several apartment complexes that are great for graduate students. Some of our favorites are Toftrees, Turtle Creek, and Lion's Gate. Some apartments allow dogs and cats. Be careful with apartment complexes on Beaver Avenue, as these tend to be geared towards undergraduate students and are more similar to dorms than apartments. Also, be aware that there is more traffic in downtown State College and on North Atherton than in other areas.

**If you plan to move to Pennsylvania in August, start looking at apartments in February; the earlier you look, the better off you will be, because places fill up quickly!**

You can contact current graduate students to ask about housing (i.e. "is \_\_\_\_\_ a good place to live?") or if anyone is looking for a roommate. We are here to help!

**Graduate student resource guide:** <http://gradschool.psu.edu/current-students/graduate-student-resource-guide/>

**Campus maps:** <http://www.geog.psu.edu/print-campus-maps>

## Entomology Department Contact Information

The directory on the entomology website is invaluable for finding and contacting your peers and faculty: <http://ento.psu.edu/contact>

Department of Entomology Main Office  
501 ASI Building  
University Park, PA 16802  
Phone: 1-814-865-1895  
FAX: 1-814-865-3048  
entomology@psu.edu

Academic Programs:

Administrative Support Assistant for the Department of Entomology: 1-814-865-1895

### Arriving at Penn State: What to do as Soon as You Move to State College

- **Get your Penn State ID:** Go to the HUB-Robeson Center and visit room 103, which has the PNC Bank and ID+ office.
  - Go to the counter at the end of the room. They'll take your photo and give you your **Penn State ID**. You will need your driver's license or some form of government ID. See the website here. Open 9–5 M–F during summer.
    - **Why do I need my ID?** Your PSU ID is your access ID to all facilities on campus (gyms, libraries, etc.). Your ID card also has ID+, an account system where you can put money on your ID (called LionCash) and use it in stores and restaurants around campus. Go to <http://www.idcard.psu.edu/> for more information.
  - If you need to open a **bank account**, you can open a PNC bank account at the other counter or check out Penn State Federal Union Bank next door- both banks offer free checking accounts). There are also other banking options off campus.
- **Open a PSU email account:** Once you get your student ID, set up your Penn State Access Account (which allows you get onto campus computers, set-up your school email, etc.). You will need your student ID to complete this. **BE SURE TO WRITE DOWN YOUR USERNAME AND PASSWORD.** See website [here](#).
  - After getting your ID and access account, cross the street from the HUB to the Boucke building. The first-floor computer lab has specific signature stations (these stations are around campus-- there is another one in the Shields Building). Ask for assistance to open your PSU email account. (Most people don't like the PSU webmail interface, but you can set up your email account to forward emails to another account, like Gmail.)
- **Make a Duo Mobile account:** To log into your Penn State account, you will need to set up Duo Mobile. This is a free app you can download to your phone or tablet or other device. Whenever you log into your Penn State account, Duo mobile will provide you with a code on your device that you will need to log in with.
- **Access LionPATH at:** <http://launch.lionpath.psu.edu/node/2>. LionPATH is used for the following:



- **Course registration** (check out part two for more information about required courses)
- **Checking your account balance** (click on “Manage Account/Make Payments”).
  - If you ever have to send **payments to the Bursar**, it is better to send a check because credit card payments include a surcharge.
- **Viewing your grades** at the end of the semester (shown under “My Grades”)
- **Viewing your transcript** (Click on Academics, scroll down and click on “Academic Records” on the right side of the page)
- **Viewing your class schedule** (shown under “My Class Schedule”)
- **Access Canvas at <https://psu.instructure.com/login/ldap>**: You will need to use Canvas for many of your courses and TA assignments. Canvas can also be accessed from LionPATH.
- **Contact the Entomology office** in 501 ASI for a packet of forms you’ll need to fill out **in order to get paid**.
  - As a graduate student, you will automatically be given the graduate student insurance plan, which includes medical, dental and eyecare coverage. The cost comes out of your stipend.
  - If you don't want **insurance** through PSU (e.g. you're on your parent's insurance), make sure you decline it because you are automatically enrolled.
  - **Dependents** are not automatically enrolled in insurance and they need to be re-enrolled every year. More information on the insurance plan and how to add a dependent can be found here: <http://studentaffairs.psu.edu/health/services/insurance/graduateassistant.shtml>
- **Get a permit for your car**: You can pay for a parking permit online at <http://transportation.psu.edu/student-parking-registration>. The parking office will mail the permit to you for the Fall and Spring semesters, but in the summer, you have to pick it up from the parking office at the Eisenhower Parking deck.
  - For the standard commuter permit:
    - On weekdays until 4PM, you can park your car in Lot 44 by the Bryce Jordan Center and either walk or take any of the free Loop or Link CATA buses to get to ASI (the free buses include the Red Link, Blue Loop, Green Link and White Loop). You can get real-time Campus Shuttle information on the CATA App, or on TransLoc Rider at <http://psu.transloc.com/>
    - On weekdays after 4PM and weekends, you can park in the ASI parking lot (East Deck) and Eisenhower Parking Deck.



501 ASI Building  
University Park, PA 16802 USA

- If your office is in another building, you or your lab group may get a mailbox there instead of in ASI. Check with your advisor about this.
- **Get your picture taken:** All faculty and students have their **photograph** on the departmental website (<http://ento.psu.edu/directory/grad-students>) and the corkboard on the 5<sup>th</sup> floor of ASI. Contact Nick Sloff ([nws10@psu.edu](mailto:nws10@psu.edu)) to schedule a time to have your picture taken.
- **Review the College of Agriculture's' policy on academic integrity, cheating and plagiarism,** available here: <http://agsci.psu.edu/students/advising/academic-integrity> You can also review the University's policy manual here: <http://guru.psu.edu/policies/>
- **Have a meeting with your advisor:** discuss your plans for the semester and what you should be working on. Be clear about what is expected from you in the lab. See if your lab has a statement of mutual expectations or other document that clearly outlines everything that is expected of you as a student.

### Campus Resources:

- There is a **free tax service on campus** for students or scholars who are residents (for federal tax purposes) and have income less than \$51,000. The service is the Volunteer Income Tax Assistance Program in the Ferguson Building, Room 10. Schedule an appointment by called 1-814-863-7448. Find more information at: <http://extension.psu.edu/income-tax/vita>.
- **University Health Services** is located in the UHS building, next to the Bank of America Career Services Building, close to Millennium Science Complex. Check out more here: <http://studentaffairs.psu.edu/health/>.
  - Call and make an appointment when you feel sick. Appointments are available every day of the week. If it is not an emergency, you can schedule your appointments online at: [http://www.sa.psu.edu/uhs/basics/online\\_access.cfm](http://www.sa.psu.edu/uhs/basics/online_access.cfm).
  - There is also an advice nurse you can call at 1-814-863-4463. Make sure to have your student ID ready.
  - How to get health insurance information:
    - Go to <http://studentaffairs.psu.edu/health/services/insurance/>. There is information on rates/subsidies, in-network providers, and on coverage benefits
    - Contact the student insurance office at 1-814-865-7467 or [uhs-insurance@psu.edu](mailto:uhs-insurance@psu.edu)

- You can also visit the insurance office in the UHS building on campus.
  - Referrals and what is covered:
    - Most services are covered at the University Health Center, including blood work, physicals, yearly check-ups, birth control and more. Some costs related to maternity or prenatal care/complications are also covered. If you need physical therapy, you are covered for 40 sessions a year.
    - Not all services are offered on campus. If you are referred to an outside doctor or counselor, ask if you need to pay a deductible and make sure you are covered before you go!
- The **Penn State Counseling and Psychological Services (CAPS)** provides free short-term counseling. You can meet individually with a therapist or attend group sessions. Find out more here: <http://studentaffairs.psu.edu/counseling/>.
  - **CAPS Chat** provides informal, drop-in consultation for students with counselors from Penn State Counseling & Psychological Services (CAPS). Sessions are free and no appointment is necessary. Students are seen on a first-come, first-served basis and meetings are no longer than 30 minutes. More information about CAPS Chat including times/locations can be found at the following link:  
<http://studentaffairs.psu.edu/counseling/capschat.shtml>
- There is a **Statistical Consulting Center** (part of the Statistics department) which can help you learn the best way to analyze your data (for free!). Make sure to sign up for this service early in the semester. The SCC can also help with experiment design. A statistician on call service is also for 1-hour consultations.
- The **Penn State Career Services Center** offers free appointments with career counselors who can help you write CVs, resumes, and apply for jobs. Check out their website at <http://studentaffairs.psu.edu/career/>
- The **library** is a great resource on campus, both for research and for entertainment. You can take out books, DVDs, CDs, and more!
  - **Check out books** and other materials at the help desk on the first floor between the Pattee and Paterno libraries. There are also automated book check-out locations all throughout the library.
  - The library is huge and consists of several buildings, which can make it hard to find materials. Fortunately, you can **reserve library books and other materials online**. Go to the library website (<https://libraries.psu.edu/>), search the CAT (catalog) for your item, click the “I want it” link and specify where you want to pick it up (typically the Pattee help desk). Library staff will pull materials for you and have them ready for pick up in few days. You'll be notified when they have them ready.

- You can request books and other materials that aren't in the library catalog by using ILLiad, an interlibrary loan service that is completely free. You can also use ILLiad to request journal articles and book chapters-- the library will scan them for you and deliver a pdf to you electronically:  
<https://psu.illiad.oclc.org/illiad/upm/>
- You can **renew materials** in person or online:
  - Library materials: you can take out DVDs and CDs for a week and renew them up to 8 times. Graduate students can keep books for the whole semester and have the option to renew them at the end of the semester to keep them longer.
  - ILLiad materials: Some loan materials are restricted to library use only, but for others the return date will be printed on the box or book sleeve on your loan material. To request a renewal, you will have to log into ILLiad.
- You can access **electronic resources and databases** from the library website (<https://libraries.psu.edu/>)
  - If you use Google Scholar and have a Gmail account, you can add Penn State library access to your account by logging in, going to the Google Scholar main page, clicking settings at the top right of the page, then clicking "library links" on the middle left of the page. Search for Penn State and add it to your account for free access to pdfs.
- The **Graduate Student Writing Center** will help you improve your writing. They offer workshops, and you can also meet individually with a consultant. Find out more here: <http://gwc.psu.edu/>.
- **Enterprise CarShare** is available to all Penn State students, faculty and staff at the University Park campus. Find out more here:  
<https://www.enterprisecarshare.com/us/en/programs/university/psu.html>
- There are also **FLEET** services on campus that you can rent vehicles from.
  - You must be 25 and take the van safety training before you can drive 15-passenger vans (<https://www.alertdriving.com/pennstate.php>).
- Zimride is Penn State's free ridesharing network that connects riders and drivers traveling to the same destination to save money (like Uber). Find out more at <http://zimride.com/psu>
- **Zagster bike share** is available around the main University Park campus. To sign up, either download the Zagster app at the Apple App or Google Play store, or visit <http://zagster.com/psu>.
- **Information technologies** at the Media Commons center in the library offer students, faculty, and staff resources to manage, update, and maintain their PC

and/or Macintosh computers. Their website, <http://its.psu.edu/> provides current IT updates and free downloadable (and safe) software such as Norton Antivirus.

- Penn State also offers free and discounted software such as Adobe Photoshop and Microsoft Office at <http://software.psu.edu/>.
- Check out **Penn State Remote Apps**, which gives you access to programs like SAS, Minitab, ArcGIS, etc., for free. Some courses require certain programs you can find here: <http://clc.its.psu.edu/UnivServices/RemoteAppsSW>

### Departmental Resources and Activities:

- The **Entomology Graduate Student Association (EGSA)** is your key to becoming a great entomologist. You can serve on committees, apply for department-specific awards, participate in journal club, try out for the Linnaean games team, and more. Apart from offering professional development opportunities, EGSA also schedules many social events for entomology students throughout the year. **Get involved early!**
  - You can also participate in the Penn State Graduate Professional Student Association (GPSA). Check it out at: <http://gpsa.psu.edu/>
- The department has a **live insect zoo** in the ASI 5<sup>th</sup> floor hallway (roaches, tarantula, walking sticks, etc.), which are used for outreach. Sign up for EGSA critter care to help out!
- At **recruitment weekend**, you can meet incoming students (and have free meals). Your input is very important in helping us build the department.
- You can also participate in **faculty interviews**. Go to the job talks and offer feedback. Help us build the department!
- The **Frost Entomological Museum** has an extensive insect collection for research. If you want to incorporate museum specimens into your work, contact Andy Deans ([adeans@psu.edu](mailto:adeans@psu.edu)), current curator of the museum.
  - Check out the Frost Curator's Blog at <http://sites.psu.edu/frost/> to learn more about research and events going on at the Frost.
- **Outreach is a huge part of our department.** Every fall, the department holds the Great Insect Fair, a unique event attracting >8,000 people. You can also help at the entomology booth at Exploration Day in the spring or be a counselor at Bug Camp for kids in the summer.
  - There is a departmental listserv devoted solely to outreach (ask the EGSA Outreach officer to subscribe). These are great opportunities for experience and look great on your CV.
- Every Friday during the semester is a **weekly seminar**. Come to listen to talks from people from different departments, and have breakfast or lunch with them--

this is a great opportunity to network and meet people from other backgrounds. The department will send out emails for seminar times and locations.

- You can meet more people from the department (students, faculty and staff) in the **Friday coffee break** in room 504, ASI. Check each semester for what time the coffee break will be held (it is usually the hour prior to seminar).
- The Millennium Science Cafe is every Tuesday in the Millennium Science Complex. There are usually a few speakers from different fields who talk for 15-30 minutes each. Coffee and pastries are provided.
- There is a **locker room** in the basement of ASI. Get your own lock and use one of the cabinets if you need to. It's helpful when biking to campus or doing field work in the summer. There is also a shower.
- There are **EGSA snack cabinets** in the ASI and CEL mailrooms, which have a variety of snacks and sodas available for purchase. All proceeds go to EGSA.
- All of the computers on campus in our department are maintained and handled by **AG IT**. Their website is here:  
[http://agsci.psu.edu/it?utm\\_campaign=Ag+IT+Matters%3A+University+Park&utm\\_medium=email&utm\\_source=newsletter](http://agsci.psu.edu/it?utm_campaign=Ag+IT+Matters%3A+University+Park&utm_medium=email&utm_source=newsletter)
  - If you ever have problems with a departmental computer, you can always:
    - Submit a [Help Request](#) on the web
    - Email [aghelpdesk@psu.edu](mailto:aghelpdesk@psu.edu)
    - Call at 1-814-865-1229
- Each lab has an account number for use on the **photocopy machine** in the ASI mailroom. Ask your lab for their account number. At the CEL, each person has his/her own account number.
- Many labs have their own vehicles. Ask your advisor if your lab has a vehicle and what you need to do to drive it.

### Entertainment and Others:

- The Student Programming Association (SPA) plans **free events** like magic shows, comedians, guest speakers and concerts:  
<https://www.facebook.com/PSU.SPA>
- You can get student tickets for shows at the Center for Performing Arts (<https://cpa.psu.edu/events>) and the Bryce Jordan Center (<https://bjc.psu.edu/>).
- Mainstream movies are shown in the HUB every weekend- just bring your student ID and it's free. Look up the student activities webpage for updated info, check the Collegian newspaper on campus, or look for signs at the HUB.
- There are also \$5 movies every Tuesday at all UEC theaters in the State College area, and you can always rent movies for free from the library.

- The Center for Arts and Crafts offers discounted classes in pottery, stained glass, drawing and more.
  - For questions, email [craftcenter@psu.edu](mailto:craftcenter@psu.edu)
- With your ID, you can get **free tickets to Spikes baseball games** at the HUB on Monday, Wednesday and Fridays from 11am-1pm, or at the ticket stand before each game.
- Go see a football game at Beaver Stadium. Go Nittany Lions! Let's go State!
  - For student tickets, an email will go out in May saying what day and time tickets will go on sale for your group. Go early-- they can sell out within minutes of becoming available.
  - You can also buy tickets online at Ticketmaster, StubHub, etc.
  - You can scalp tickets outside on the day of the game.
  - There is always a free game called the Blue and White game in the spring.
- There is a student activities fee built into tuition, so all graduate students have **free access to the student gym and pool facilities** on campus. The gym offers free classes and other activities (ex: rock climbing wall) that you can find out about here: <https://studentaffairs.psu.edu/health-wellness/recreation-leisure/fitness-wellness/fitness-wellness-schedule>
- Pegula Ice Area offers discounted student public ice skating and memberships: <http://www.gopsusports.com/pegula-ice-arena/public-sessions.html>
  - <http://pegulaicearena.maxgalaxy.net/Schedule.aspx?ID=1>
- Graduate students can get involved with club sports: <http://sites.psu.edu/clubsports/>
- Graduate students can also get involved with music organizations: <https://music.psu.edu/admissions/basic/opportunities-for-non-majors>
- A full list of student organizations can be found here: <https://studentaffairs.psu.edu/involvement-student-life/student-organizations/join-student-organization>
- For **outdoor lovers**, Penn State Adventure recreation has great weekend activities that are reasonably priced: <http://www.athletics.psu.edu/advrec/trips.html>. There are also numerous hiking trails and parks in the area:
  - Penn State Arboretum
  - Millbrook Marsh
  - Scotia Barrens/State Game Lands no. 576 (don't hike there during hunting season!)
  - Rothrock State Forest
  - Shavers Creek/Stone Valley
  - Musser Gap
  - Shingletown Gap



- Fisherman's Paradise
- Black Moshannon State Park
  - (They have monthly events all year:  
[http://events.dcnr.pa.gov/black\\_moshannon\\_state\\_park/calendar/](http://events.dcnr.pa.gov/black_moshannon_state_park/calendar/))
- Thousand Steps Hike
- Bald Eagle State Park
- Whipple Dam State Park
- [Canoe Creek State Park](#)
- [Raystown Lake Recreation Area](#)
- **Looking for fresh veggies?**
  - During the summer months, the **Farmer's Market** is held on Locust Lane in downtown State College or at Home Depot on N. Atherton Street. Numerous vendors sell fruits and vegetables as well as freshly baked goods and arts and crafts too.
    - There are other farmers markets in Boalsburg, Bellefonte, Lemont and Millheim.
  - You can join CSA's (**community supported agriculture**) - you pay upfront for the season and farms which bring you a box of vegetables every week (two possibilities: Village Acres Farm and Tait Farm).
- There are many great farms in the area offering fresh produce, dairy and more. Some of our favorites are:
  - Wasson Farm: The Entomology Department often has a pig roast here in the fall. The Wasson Farm Fall Fest is a huge event every year- check out the corn maze, pet the animals and pick your own pumpkins!
  - Way Fruit Farm: Check out their Saturday breakfast buffet, apple cider doughnuts, and U-pick strawberries.
  - Bee Tree Organic Fruit Farm: Pick organic strawberries, blueberries, elderberries, raspberries, and more!
  - Tait Farm: Well-known in the area for their fruit shrubs, drink mixes that you will find on the menu in many local restaurants.
  - Harner Farm: Apples, peaches, sweet corn, Christmas trees, and more!
  - Musser Dairy: Check out their yogurt!
  - Meyer's Dairy on S. Atherton St. has milk in glass bottles and very delicious ice cream sundaes.
- For students who like to garden, but don't have land, there are several **community gardens** in State College:
  - PSU Community Garden: <http://www.psucommunitygarden.org/>
  - Tudek Park Community Garden: <http://www.crpr.org/parks/gardenplots/garden-plot-index.html>

- Meat Stores
  - The Penn State Meats Lab sells fresh meat and eggs every Friday during the Spring and Fall semesters. Find out more here: <http://animalscience.psu.edu/facilities/meats-lab>
  - Nittany Meats: Local butchery offering fresh selection of meats: chicken, sausage, steaks, pork and more. They can also do custom cuts of meat for you.
- The **Berkey Creamery** is famous-- Ben and Jerry learned how to make ice cream there! It can get very crowded during the summer; when the ice cream hunger starts, the quickest way through is to get the pre-packaged ice cream from the freezers. Same flavors, no wait.
  - There are other ice cream places around town: Momotaro, Happy Buns, Sauly Boy's gelato, Cold Stone Creamery and Meyer's Dairy on S. Atherton St. (which has milk in glass bottles.)
- Purchasing from **beer distributors** is a great way to save money on booze. Here are some local distilleries:
  - Beer Belly's Beverage
  - W.R. Hickey
  - Pletcher's Beer Distributor
  - Nittany Beverage Beer Distributor
  - Happy Valley Refreshment (Boalsburg)
- The Nittany Mall is the shopping mall of State College. There is more shopping located around the mall as well.
- Goodwill has sales on Monday and Sunday. There are also extra student discounts days (currently Sunday, Tuesday, and Thursday. Just show your ID!), and you can get a punch card to get more savings.
- Memorial Day weekend is a big deal in Boalsburg! (Memorial Day began there!)
- 4th Fest occurs every year at Beaver Stadium to celebrate the 4th of July
- Arts Fest occurs in State College, Boalsburg, Bellefonte and Lemont during the summer
- Do you love county fairs? Here's a website that lists all county fairs in Pennsylvania: <http://www.pafairs.org/>. One county fair you should definitely check out is the Grange Fair, which happens at the end of August.
- Tussey Mountain has different events year-round:
  - Wing Fest (A competition to see who can make the best chicken wings, as well as outdoor concerts. Bring chairs or blankets to sit on, and a tray to hold all your wings!)
  - Celtic Fest
  - Beer Fest
  - Movies on the Mountain

- Skiing and tubing during the winter
- Go-karts, golf and mini-golf
- Events in Lemont:
  - Strawberry Festival in the Spring
  - Bluegrass nights in the Summer
  - German Christmas Market in December
- Other attractions
  - Mt. Nittany Winery: <http://www.mtnittanywinery.com/>
  - Local movie theaters and drive-ins: <http://www.statecollege.com/movies/>
  - Penn's Cave: <http://www.pennscave.com/>
  - Hershey Park: <http://www.hersheypark.com/>

### **Where to eat and get coffee:**

- Restaurants
  - On Campus
    - Penn State Creamery (they also have pizzas, salads, sandwiches, and baked goods). If you purchase their reusable travel mug, you pay a discounted rate (currently \$0.95) for coffee.
    - Starbucks Coffee and Blue Chip Bistro on the first floor of the Business Building
    - The HUB offers fast food, sandwiches, salads, coffee, sushi, and more.
      - There's a coffee shop in the bookstore too, so if you need a snack and/or coffee after 2, you can still get served.
    - Au Bon Pain (four locations on campus)
    - Cafe Laura
  - Downtown
    - There are lots of choices! Some of our favorites for lunch are below. Have fun exploring and trying them out for yourself!
      - Little Szechuan
      - India Pavillion
      - Big Bowl Noodle House
      - Galanga
      - Cozy Thai
      - Irvings
      - Sower's Cafe
      - Tadashi
      - The Tavern
      - Local Whiskey

- Liberty
- Inferno
- Federal Taphouse
- Champs
- Cafe 210
- Green Bowl
- Bagel Crust
- The Deli and/or Pickles
- Yallah Taco
- Karma
- Sauly Boy's
- Kondu
- Allen Street Grill and the Corner Room
- Other restaurants around State College include:
  - Kamrai
  - All American Alehouse
  - Barrel 21
  - Otto's Pub and Brewery
  - Happy Valley Brewery
  - Faccia Luna
  - The Field at Toftrees
  - Kelly's
  - Duffy's
  - Home Delivery
  - Olde New Yorker
  - Big Spring Spirits
  - Elk Creek Cafe
  - Gigi's
  - HiWay Pizza
- Coffee shops around State College:
  - Downtown
    - Websters: <http://webstersbooksandcafe.com/>
    - Saints: <http://statecollegedcoffeeshop.com/>
    - Barranquero Cafe: <http://www.barranquerocafe.com/>
    - Cafe Verve (exclusively vegan):  
<https://www.cafevervestatecollege.com/>
    - The Cheese Shop (they also have great coffee and tea for sale!)
    - Abba Java (they have free treats!)
  - If you want to go out of town:
    - Cafe Lemont

- The Naked Egg (in Pine Grove Mills)
- The Pump Station (in Boalsburg)
- Cool Beans (in Bellefonte)
- Cafe on the Park (in Bellefonte)

### **Getting Settled in State College**

- Supermarkets in State College
  - Wegmans
  - Trader Joe's
  - Weis (three locations)
  - Giant (two locations)
  - Walmart (two locations)
  - Far East Corners Asian Market
  - And more!
- Doctors
  - All services at UHS are free for those with the graduate student insurance. You will need to contact the insurance office to see what other doctors take the student insurance.
    - University Health Services: 1-814-863-0774
    - University Health Advice Nurse: 1-814-863-4463
- Recommended dentists who take the student health insurance:
  - Jocelyn Anderton
  - Kotary, Detar & Associates
  - White, Roan & Associates
  - Pediatric Dental Care & Orthodontics, Port Matilda
  - Dr. Younkings & Associates (downtown and easy to get to!)
- Recommended Eye doctors who take the student health insurance:
  - Central Penn Vision Associates
  - Advanced Eye Care Services
- Veterinarians:
  - Halfmoon Valley Animal Hospital
  - Animal Medical Hospital of State College (online coupon for 1st time visit)
  - For 24-hour emergencies:
    - Metzger: <http://metzgeranimal.com/24-hour-emergency-veterinarians/>
    - Central Pennsylvania Veterinary Emergency Treatment Services: <http://www.cpvets.net/>
- Mechanics
  - H R Bierly's Garage & Auto
  - Boalsburg Car Company

- Tire Town
- [Graham's Exxon](#)
- The Center Area Transport Authority (CATA) offers public transit in State College, including the CATABUS service. You can find out more here: <https://www.catabus.com/>
  - Graduate students, postdocs and faculty can sign up for the RIDEpass program, which costs \$15 per month. Find out if you are eligible and more at the PSU Transportation Services website at <http://transportation.psu.edu/>.
- Lyft or Uber are both good options for getting around downtown.
- Zimride is Penn State's free ridesharing network that connects riders and drivers traveling to the same destination. Open only to Penn State students, faculty and staff, Zimride makes it fun and easy to find friends and classmates to split the costs for your trip. Join, post a ride or find a ride in three easy steps:
  - Create a profile at <http://zimride.com/psu>.
  - Post a ride as a driver or passenger.
  - Find a match.
- Megabus offers transportation to other cities outside of State College, and leaves from the parking lot at the Walmart on Atherton. Find out more here: <https://us.megabus.com/>
- Airports
  - There is an airport in State College, though it is very small and expensive to use. For cheaper flights, you might be better off driving to Philadelphia, Pittsburgh, Newark (NJ), or Baltimore (MD) and flying out of the larger airports there.

### **Tips and Resources for International Students**

As an international student, the first few weeks in the US can be overwhelming between getting settled in a new country and completing necessary paperwork. Here are some tips for getting started at Penn State:

- Try to arrive in State College at least a few weeks before classes start to give yourself time to get oriented and settled in.
- All international students must take the AEOCPT (American English Oral Communicative Test).
- Attend the orientation sessions! There will be a mandatory orientation for international students as the beginning of the Fall semester. Attend and listen carefully; they will tell you everything you need to know.
  - You will also get your I-9 paperwork at orientation, which needs to be done in order to get paid.

- Orientation sessions are also a great place to meet other international students.
- Spend the first two weeks getting all paperwork done. Never skip or delay required paperwork (especially visa paperwork!). Don't start bench work until it's done. Some important things to do include:
  - Contact the Entomology department to get enrolled.
  - Contact the Directorate of International Student and Scholar Advising (DISSA) to get your visa paperwork done
  - Get your bank account set up so you can be paid.
  - **Important:** No U.S. Customs officials will contact you by phone, but scammers pretending to be US Customs officials will. They prey on international students and will try to scam money by phone. Do not give out your bank account or credit card numbers over the phone.
- Find out if there are any members in the department who are from your country. They can give you advice and help guide you.
- Single graduate students and students with families are eligible to apply for housing at [White Course Apartments](#). Postdoctoral students are not eligible for on-campus housing.
  - You can also contact your advisor and other graduate students in your lab or in the department if you have questions about finding an apartment, roommates, what classes to take, how difficult different classes are, etc. We are here to help!
- There are groups of international students from different countries on campus who can help you get started at Penn State. This is also a great way to meet people outside your department.
- You may want to take a lighter course load for your first semester, especially if you are still adjusting to life in a new country. Ask your advisor, lab mates and other graduate students for advice about which courses are best for you in your first semester.
- Have a meeting with your advisor and discuss your plans for the semester and what you should be doing or working on. Be clear about what is expected from you in the lab. See if your lab has a statement of mutual expectations or other document that clearly outlines everything that is expected of you as a student.
- Do not cheat or plagiarize (stealing the work of others) in your classes. **Cheating in academic coursework is a very serious offense in the United States, and can result in being expelled from your program.** Read more about academic integrity here: <http://agsci.psu.edu/students/advising/academic-integrity>. You can also review the University's policy manual here: <http://guru.psu.edu/policies/>
- If you ever feel threatened, get away and call 911 immediately. Abuse of any kind is never appropriate and never your fault.

- If you are planning on staying in the United States after your PhD, you may want to start thinking about getting a Green Card. The university does not sponsor Green Cards (officially known as “Permanent Resident Cards”) for non-tenured faculty. If you want a Green Card, check the appropriate NIW (National Interest Waiver) website of USCIS (<https://www.uscis.gov/working-united-states/permanent-workers/employment-based-immigration-second-preference-eb-2>) and start working on your application as early as possible. Preparing a Green Card application can take 2-3 years, so it is never too early to start working on it. Consider buying a "do it yourself" package (it is much cheaper and absolutely possible to do without an immigration lawyer). A Green Card application for NIW is usually done by postdocs, but again, it is never too early to get the required documents together.

#### Important Contacts for International Students:

- Penn State Global has an information page for international students here: <https://global.psu.edu/category/international-students>
- The Directorate of International Student and Scholar Advising (DISSA)
  - [DISSA-Adviser@psu.edu](mailto:DISSA-Adviser@psu.edu)
  - 1-814-865-6348
  - 410 Boucke Building, University Park, PA 16802
  - There are also pre-arrival advisors who you can contact at [international@psu.edu](mailto:international@psu.edu) or call at 1-814-865-6348.
  - More information about DISSA is available here: <https://global.psu.edu/article/contact-dissa>
- Global Connections cultivates interpersonal relationships and build bridges across cultures: <http://www.qc-cc.org/>
- Foundations in Global Engagement (FiGE) Program: <https://global.psu.edu/fige>
  - This program provides an excellent opportunity to develop multinational relationships within the Penn State Community.
- Most of the international student organizations arrange welcome events for the students coming from their home country. Attending those events are highly recommended if you want to build a community relationship.
  - Attending involvement fairs (usually, it takes place within first two weeks of the semester) is a good idea as you can talk with the representatives of organizations you might want to join: <http://studentaffairs.psu.edu/hub/studentorgs/ifair.shtml>.
  - The daily emails sent by Penn State and HUB notice boards are also great places to find out about these events.



## Child Care Resources

Penn State is working to support graduate students and postdocs with families, though there's still more to be done. Unfortunately, Penn State does not currently have an official policy on maternity leaves or parental leaves of absence for graduate students and postdocs. There are guidelines in place, which can be found here: <http://gradschool.psu.edu/graduate-funding/infoga/paid-leaves/>. You can also contact Absence Management within the Office of Human Resources by phone at 1-814-865-1782 or email at [absence@psu.edu](mailto:absence@psu.edu).

Penn State health insurance does cover some costs related to birth control and maternity or prenatal care/complications for graduate students and postdocs. You can find out more about coverage by going to <http://studentaffairs.psu.edu/health/services/insurance/>, contacting the student insurance office at 1-814-865-7467 or [uhs-insurance@psu.edu](mailto:uhs-insurance@psu.edu), or by visiting the insurance office in the UHS building on campus.

Penn State does have graduate and family housing available at White Course apartments. Postdoctoral students are not eligible for on-campus housing. Find out more here: <https://housing.psu.edu/graduate-family-housing>

There is a Student Parent Child Care Subsidy program funded by the university that pays a portion of child care costs to qualifying, low-income student parents. You can find out more here: <https://ohr.psu.edu/child-care-subsidy/subsidy-program-faqs>

Penn State also has a Breastfeeding Support Program (<https://ohr.psu.edu/employee-and-family-resources/breastfeeding-support/>), offering support groups, a mentor program, consultation services, free classes on breastfeeding, and discounted supplies. There are also lactation stations located in different areas (see more here: <https://ohr.psu.edu/employee-and-family-resources/breastfeeding-support/lactation-stations/>).

Here are some more resources:

- Resources for Pregnant and Parenting Students at Penn State fact sheet: <http://equity.psu.edu/cfw/docs/pregnantandparenting010913.pdf>
- HEART of Central PA is an organization that provides support for individuals who have experienced pregnancy loss, stillbirth, infant death and/or fertility issues. They offer a free Grief and Loss support program and a free "Fertility Issues and Loss" support group. You can find out more at their homepage: <http://heartofcpa.org/>

## **A Message from Penn State on Reporting Wrongdoing and Assistance**

All members of the Penn State community are asked to remain mindful of their individual commitment to Penn State's core values of [Respect, Integrity, Responsibility and Community](#) by helping to keep the University a safe and ethical institution. In addition, as members of this community, everyone should be responsible stewards of University funds, whether generated from state, federal, student or other sources.

The University does not condone wrongful conduct by any member of the Penn State community, no matter what position he or she may hold.

Penn State University encourages the reporting of misconduct. **If you see something, say something.**

If you report misconduct, be assured that the University will protect you from retaliation. See AD67 (<https://guru.psu.edu/policies/AD67.html>) or contact the Office of Ethics & Compliance for more information (<http://www.universityethics.psu.edu/>).

The following resources are available for faculty, staff, students, and others:

### **TO MAKE A REPORT**

**A summary of types of misconduct and how to report is available at <http://reporting.psu.edu>.**

If at any point you are unsure where to report a non-emergency, you may contact:

- The Office of Ethics and Compliance, Monday-Friday, 8 a.m.-5 p.m. ET: **1-814-867-5088**
- The Penn State Hotline, 24/7: **1-800-560-1637** or <http://hotline.psu.edu>

### **Crime or emergency situations**

- Contact the campus police or security office
- In an emergency, dial **911**
- Penn State has established a [Responsible Action Protocol](#), whereby students who seek medical assistance for peers suffering from alcohol poisoning or related problems would not be charged through the campus student conduct system for their own alcohol violations. In addition, the

Pennsylvania Crimes Code provides immunity to individuals under the age of 21 from prosecution for possession or consumption of alcohol, when that person seeks medical assistance for someone who they believe requires such assistance.

**Suspected ethical or policy violations** (including fraud, theft, conflict of interest, abusive or intimidating behavior, retaliation, athletics integrity or NCAA compliance)

- Report the misconduct to your supervisor or HR Strategic Partner (<http://ohr.psu.edu/content/hr-strategic-partner-and-consultant-directory>)
- Use Penn State Hotline at **1-800-560-1637** or <http://hotline.psu.edu>. Both are anonymous and available 24/7

**Child abuse, including child sexual abuse**

- Contact the Pennsylvania Child Welfare Services "ChildLine" at **1-800-932-0313** or <https://www.compass.state.pa.us/cwis>
- If the child is in immediate danger, dial **911** first
- You must also email [AD72@psu.edu](mailto:AD72@psu.edu) communicating that a report has been made. For more information on AD72 (Reporting Suspected Child Abuse), see <https://guru.psu.edu/policies/AD72.html>
- Further details can be found in the Building a Safe Penn State: Reporting Child Abuse training available on the Learning Resource Network at <http://lrn.psu.edu>

**Behavioral threat**

- Contact the Behavioral Threat Management Team at **1-855-863-BTMT (2868), 1-814-863-BTMT (2868)**, [reportBTMT@psu.edu](mailto:reportBTMT@psu.edu) or <http://btmt.psu.edu/>

**Bias, discrimination or harassment**

- Contact the Affirmative Action Office at **1-814-863-0471**
- Visit the Report Bias website: <http://equity.psu.edu/reportbias>
- Acts of intolerance by students may be reported to the Office of Student Conduct at **1-814-863-0342**

**Sexual harassment and other forms of sexual misconduct\*\***

- **To make a report to the University:**

- Contact the University's Title IX Coordinator at **1-814-867-0099** or [titleix@psu.edu](mailto:titleix@psu.edu)
- **To file an online report:** Visit the Office of Sexual Misconduct Prevention and Response's website at <http://titleix.psu.edu/filing-a-report/> to file an online report
- **To file an anonymous report:** The Penn State Hotline is available 24/7 at **1-800-560-1637** or <http://hotline.psu.edu>. Both are anonymous and available 24/7
- **To file a complaint outside of the University:**
  - The Office for Civil Rights (Philadelphia Office) at **1-215-656-8541** or email [OCR.Philadelphia@ed.gov](mailto:OCR.Philadelphia@ed.gov)
  - The Equal Employment Opportunity Commission (Philadelphia District Office) at **1-800-669-4000**
  - The Pennsylvania Human Relations Commission (Harrisburg Regional Office) at **1-717-787-9780**

**\*\* Additional information regarding information and resources available in relation to incidents of sexual harassment and/or misconduct (including a campus-specific list of victim support services and confidential reporting options) can be found at <http://titleix.psu.edu/>**

#### **Student Misconduct**

- Contact the Office of Student Conduct at **1-814-863-0342** or <http://studentaffairs.psu.edu/conduct> or report at [https://pennstate.qualtrics.com/jfe/form/SV\\_8qYxyWYciWERPGI](https://pennstate.qualtrics.com/jfe/form/SV_8qYxyWYciWERPGI)

Hazing by any student organization or individual is against Penn State's code of conduct, and also a violation of Pennsylvania law. To report instances of hazing within any student organization or group, including fraternities and sororities, contact the Penn State Hotline at **1-800-560-1637** or <http://hotline.psu.edu>.

#### **Research-related**

- Contact the Office for Research Protections at **1-814-865-1775** or [orp@psu.edu](mailto:orp@psu.edu)

#### **RESOURCES**

- Policy AD88 – Code of Responsible Conduct: <http://guru.psu.edu/policies/AD88.html>

- By-laws of The Pennsylvania State University (section 8.13):  
<http://news.psu.edu/story/143476/2013/01/04/employees-reminded-disclose-conflicts-interest>
- Policy HR91 – Conflict of Interest:  
<https://guru.psu.edu/policies/OHR/hr91.html>
- Policy RP02 – Addressing Allegations of Research Misconduct:  
<https://guru.psu.edu/policies/RP02.html>
- Policy RP06 – Disclosure and Management of Significant Financial Interests: <https://guru.psu.edu/policies/rp06.html>
- Policy AD77 – Engaging in Outside Professional Activities (Conflict of Commitment): <http://guru.psu.edu/policies/AD77.html>
- Policy AD85 – Sexual and/or Gender-Based Harassment and Misconduct (Including Sexual Harassment, Sexual Assault, Dating Violence, Domestic Violence, Stalking, and Related Inappropriate Conduct):  
<https://guru.psu.edu/policies/AD85.html>
- Policy AD86 – Acceptance of Gifts and Entertainment:  
<https://guru.psu.edu/policies/AD86.html>
- Policy AD91 – Discrimination and Harassment and Related Inappropriate Conduct: <https://guru.psu.edu/policies/AD91.html>

If it is not clear where to turn for assistance, any of these offices will guide you to someone who can help:

- Office of Human Resources Employee Relations Division at **1-814-865-1412** or <http://ohr.psu.edu/employee-relations/>
- Office of Ethics and Compliance at **1-814-867-5088** or <http://www.universityethics.psu.edu/>
- Office of Affirmative Action at **1-814-863-0471** or <http://www.psu.edu/dept/aaoffice/>
- Office of Sexual Misconduct Prevention and Response at **1-814-867-0099** or [titleix@psu.edu](mailto:titleix@psu.edu)
- Office of Student Conduct at **1-814-863-0342** or <http://studentaffairs.psu.edu/conduct>
- Office of Internal Audit at **1-814-865-9596** or <http://www.internalaudit.psu.edu/>
- Clery Act Compliance Manager at **1-814-863-1273** or <http://www.police.psu.edu/clery/>
- Your campus, college, or unit's Human Resources Strategic Partner. Contact information is available <http://ohr.psu.edu/content/hr-strategic-partner-and-consultant-directory>

## **TRAINING**

Training for employees is available on many of the above topics through the Office of Human Resources' Learning Resource Network at <http://lrn.psu.edu>.

**For more information and resources on how to make reports and what numbers to call, you can visit the website of the Office of Ethics and Compliance, found here: <http://universityethics.psu.edu/resources-reporting-wrongdoing>**

### **Other Useful Contacts and Resources:**

Penn State Safe Walk Service: 1-814-865-9255

Penn State Environmental Health and Safety (EHS): 1-814-865-6391

University Health Services: 1-814-863-0774

University Health Advice Nurse: 1-814-863-4463

### **Community Contacts and Resources**

ChildLine for Reporting Child Abuse: 1-800-932-0313

Centre County Women's Resource Center: 1-877-234-5050

Pennsylvania Coalition Against Rape: 1-888-772-7227

National Sexual Assault Hotline (RAINN): 1-800-656-4673

Domestic Violence Hotline: 1-800-799-7233

### **Entomological Graduate Student Association (EGSA)**

The Entomology Graduate Student Association (EGSA) exists to foster a friendly and interactive community among graduate students. Additionally, the organization strives to promote professional connections and give back to the community through facilitation of public outreach and teaching. EGSA also provides a forum for feedback regarding the Entomology Graduate Program and acts as an important liaison between faculty and students.

All graduate students in the department are automatic members of the EGSA. We are responsible for organizing departmental outreach at schools, running Bug Camp and assisting with running the Great Insect Fair. We also run merchandise sales, keep the snack cabinets stocked, and run social events for students to relax and meet students from other departments. There are many opportunities for students to work on their professional development and enhance their CVs through student-run seminars and journal club, as well as by serving as officers or committee members. EGSA meetings are held at least twice a semester, and elections take place every May.

Our website is here: <http://ento.psu.edu/graduateprograms/egsa>

Here is a list of some of the different officer positions you can run for:

- President
- Vice President
- Secretary
- Treasurer
- ESA Eastern Branch Representative
- Webmaster

### EGSA Committees

EGSA committees are formed to fulfill a specific purpose or goal. Each committee consists of a leader and several volunteers. There is no limit to how many people can be on each committee-- the more volunteers, the better! If you would like to start a new committee, speak to the EGSA president or bring it up at an EGSA meeting. Permanent committees are listed below:

- Bug Camp Committee
- Critter Care Committee
- Outreach Committee

### Departmental Committees

Each position corresponds to a faculty committee. Your job is to attend the faculty meetings as a student representative and then report to the student list-serv and at EGSA meetings what happened at that committee meeting.

- Instruction Committee
- Seminar Committee
- Awards Committee
- Space Planning Committee
- Safety Committee
- Candidacy Committee
- Social Committee
- Public Outreach Committee
- Nominations Committee
- Recruiting Committee

We're here to address any of your questions or concerns. Don't hesitate to contact current officers for help: <http://ento.psu.edu/graduateprograms/egsa/officers>

## Using the Departmental and Student Listservs

The listserv for all entomology students is [L-AG-ENT-STUDENTS@lists.psu.edu](mailto:L-AG-ENT-STUDENTS@lists.psu.edu)

The listserv for the department (students, faculty and staff) is [L-AG-ENT@lists.psu.edu](mailto:L-AG-ENT@lists.psu.edu).

When you email the list serv, **everyone** sees it. Therefore, you should not email the listserv unless it is important. Use it wisely! Also, be professional in your writing and be sure to proofread any emails you send.

Examples of appropriate things to email the list serv about:

- EGSA or department-related events or seminars
- Outreach
- Job announcements and openings

Use the listserv sparingly for the following purposes:

- You have extra reagents/supplies to give to another lab, or need reagents/supplies that another lab may have
- Roommates (whether for a conference or housing-related in the department, such as a new student or a visiting scholar)

In these cases, it's ok to use the listserv, but it is better to ask people you know first. Try to use the listserv as a last resort in these cases.

Never contact the listserv to complain, blame or accuse others. It is unprofessional and the entire department can see it.

## Other Organizations on Campus

- Center for Pollinator Research (CPR)
  - This is a group of individuals (faculty, extension specialists, students, etc.) interested in creating and initiating strategies to support pollinators. If you are interested please visit the website for more information: <http://ento.psu.edu/pollinators>. To join the email listserv, email Christina Grozinger ([cmgrozinger@psu.edu](mailto:cmgrozinger@psu.edu)).
- Pennsylvania Association for Sustainable Agriculture (PASA)



- They are a regional sustainable agriculture organization that holds a conference in State College annually and many other ag related events in the area. For more information: [www.pasafarming.org](http://www.pasafarming.org)
- Coalition of Graduate Employees (CGE)
  - They are working to form an independent union to represent the interests of graduate students, and work towards addressing issues and protecting the rights of graduate student workers. You can find out more here: <http://cge-psu.com/>.
- Graduate and Professional Student Association (GPSA)
  - This is a professional organization that aims to benefit graduate and professional student life. There are many opportunities to get involved in outreach and student government. Their website is <http://gpsa.psu.edu/>.
- The Center for Infectious Disease Dynamics (CIDD)
  - This group integrates many different types of scientists interested in infectious disease. Check out the website here: <http://www.cidd.psu.edu/>. To get on the CIDD email lists you can send an email to Monica Arismendi ([mha15@psu.edu](mailto:mha15@psu.edu)). You'll receive information about student events (journal club, lunches with speakers) and CIDD invited speakers.
- Center for Infectious Disease Dynamics Graduate Student Association (CGSA)
  - This is a group for graduate students in Penn State's Center for Infectious Disease Dynamics ([CIDD](#)), but is open to all students at Penn State. They have weekly journal club meetings, professional development seminars, outreach and more. They also have their own blog at <https://cgsapsu.wordpress.com/>.
- Graduate Women in Science
  - They host events, conduct outreach, and mentor youth to encourage female representation and retention in STEM. Their website is here: <http://psugwis.weebly.com/>
- PSU Science Policy Society (SPS)
  - They have events centered around science policy and science communication. Their home website is here: <http://sites.psu.edu/psusciencepolicy/welcome/> You can also follow them on Facebook to keep up to date with events.
- LGBTQA Student Resource Center
  - The LGBTQA Student Resource Center organizes offers support and organizes may events throughout the year. You can find out more here <https://studentaffairs.psu.edu/lgbtqa/>.
- Penn State Outing Club (PSOC)
  - This is a great club for those who love spending time outdoors. They offer trips for backpacking, canoeing, kayaking, hiking, and trail maintenance

across the US, and are very affordable for graduate students. Find out more here: <https://sites.psu.edu/outingclub/>

- There are also many other clubs and organizations on campus. You can find a complete list here: <http://studentaffairs.psu.edu/clubs/>

## Part 2: Your Years at Penn State

### An Overview for Master's and PhD Students

- Read broadly in your first semester and plan out your project.
- Focus on your core classes, but don't be afraid to take any other non-core classes that interest you.
- Apply for grants and awards to fund your research.
- Try to do at least one outreach event a semester to build up your CV.
- Aim to publish at least one paper a year after your first year.
- Aim to give at least one presentation at a conference a year after your first year.
- Network constantly! Think about what kinds of careers you want, explore new things, and build up your skill set!
- Don't forget to have fun and enjoy your time here at Penn State!

### Program Requirements

The program requirements are outlined here:

<http://ento.psu.edu/graduateprograms/courses/course-listings/core-courses>

All Master's and PhD students must take three core classes:

#### ENT 518 Insect Natural History (2 Credits)

- This is a weeklong class that occurs in August before the semester begins, and is likely the first class you will take. It provides a brief intro to collecting and preserving insects in different environments, and is a good bonding experience with your cohort of incoming students.

#### ENT 432 Insect Biodiversity and Evolution (4 credits)

- This class is an introduction to the world of insect identification and systematics, with forays into morphology, evolution, and the history of entomology. There is lecture and lab twice a week, and you will need to build your own insect collection. The collection requirements change every year, so don't start collecting ahead of time.

#### ENT 522 Critical Thinking and Professional Development (6 Credits)

- The purpose of this class is to prepare you to become a successful graduate student. Lectures focus on writing grants, papers, and news articles, preparing for candidacy, planning for the future and figuring out what you need to do to

accomplish your goals. The class is offered every spring semester, with lectures 3 times a week. You must attend the ethics lessons to earn SARI credits (see below)

You are also required to take seminars (ENT 530 Advanced Topics Seminars). **You need 2 credits if you are a Master's student and 4 Credits if you are a PhD student. Each seminar is worth one credit.**

- There are several different seminars, and these change from semester to semester. Most of them are set up to be a once-a-week meeting where everyone reads a paper, and then one student gives a presentation and leads a discussion on that paper.
- You can also take seminars outside of the department, but you need to get approval from Gary Felton first.

All students are required to serve as a teaching assistant (TA). **M.S. students must TA a minimum of one course, while PhD students must TA a minimum of two courses.**

- See more below in the section on Teaching Assistantships.

A PhD student must pass a candidacy exam (usually 3rd semester) and a comprehensive exam (usually 5th semester).

All students, Master's and PhD, must assemble a committee, write a dissertation and pass a defense at the end of their program.

#### SARI (Scholastic and Research Integrity) Requirements

1. During the first year of enrollment, graduate students will be required to complete an online RCR training program provided by the Collaborative Institutional Training Initiative (CITI). The Office for Research Protections (ORP) will provide the link to this training via the SARI Resource Portal on the ORP website ([www.research.psu.edu/orp](http://www.research.psu.edu/orp)).
2. Graduate students will also be required to engage in an additional 5 hours of discussion-based RCR education prior to degree completion. These discussions will encompass both universal and discipline-specific material. (ENT 522 Critical Thinking and Professional Development will fulfill this requirement.)

Many students also choose to take a statistics or GIS course, but don't feel limited-- this is a huge campus that offers many different courses. Along with courses offered by the Department of Entomology, check out the courses offered by the

Departments of Biology, Agriculture, Statistics, Bioethics, Botany, Forestry, etc.-- there are a lot of options.

## Registering for Courses

Every semester, graduate students **need to enroll in at least 9 credits**. This can be fulfilled by courses, research, and TA-ing. Failure to register by the first day of class can result in a \$250 late fee!

PhD students who have taken their comprehensives will sign up for dissertation credits. It is still possible to take courses at this point, but you are only allowed to take one 3-credit course a semester for credit. Otherwise, you can audit the class by registering for 601, which has a reduced tuition cost.

To register for courses, you need to use LionPATH:

- Once logged into LionPATH, click on “Class Search”
- Select the semester and subject you’d like to search for. You should also select “University Park” as the campus.
- You can click on classes you’re interested in to view a description.
- Once you’ve chosen, hit “Select Class” and then “Next.”
- The course should be added to your shopping cart.
- When you’re done adding classes to your cart, click on “Shopping Cart,” click the checkboxes, and hit “Enroll.”

To register for research, TA or dissertation credits, you will need to contact the administrative assistant in the main office.

## Seminar Classes

Seminars will usually have class discussions where you need to present a paper and lead a discussion. Here are some helpful tips:

- If you have the option to pick a paper, don’t just pick a paper that you are interested in-- think about the members of your discussion group and what they study. Pick a paper that others in the class will find interesting and have things to say about.
- Start your discussion with a short overview of the paper and brief background about concepts or terms that those outside the field need to know to understand the paper
- Ask open-ended questions to stimulate conversation and debate (i.e. “How do the author’s discoveries change their field? Are their findings relevant?”).

- Ask questions about the methods (“Do you think the authors took the right approach? Do you think there was more they could have done?”)
- Point out things you found surprising or confusing in the paper, and ask if there was anything that others found surprising or confusing.
- Ask others if they agree with the findings of the paper. Was there more that the researchers could have done?

The goal is to get other people to talk. You don’t want to be sitting at the front of the class talking to yourself the entire time-- you want a dialogue, not a monologue.

## Teaching Assistantships and Apprenticeships

### Overview

All students must TA a class during their time at Penn State. Master’s students have to TA at least one credit, while PhD students have to TA at least 2 credits. Different classes count for different credits. A section of ENT 313 and a section of a track course together comprise one teaching credit.

You will get your TA assignments ahead of time from the administrative assistant. After you get your assignment, contact the professor teaching the class at least a month before the start of the semester to ask what your duties will be.

The **teaching budget** will cover the costs of materials you need for teaching the class, including photocopies. Ask the professor teaching the course for access to the budget code.

If you are interested in getting credit for your TA assignment (this is important if you are working towards teaching certification), contact the main office prior to the semester which you will be a TA and request to be signed up for TA credits (ENT 602).

### Teaching Apprenticeships

You are not required to do an apprenticeship before you TA a class, and not everyone will be assigned a teaching apprenticeship. Teaching apprenticeships are usually reserved as training for those who have either never TA-ed a class before, or have never taken or TA-ed an entomology class before. Teaching apprenticeships are not worth any credits.

## Rules for TAs:

- Treat your students with respect.
- Do not date your students. At the very least, wait until after the semester is over. If someone you are dating or living with is in the class you are TA-ing, speak to the professor beforehand to make sure this is alright.
  - Do not friend your students on Facebook until after the semester. Avoid bias and friendships/relationships.
- Don't gossip or say bad things about your students in public, especially while you are on campus. You never know who might be listening.
- Grade ethics and grading:
  - Do not grade in public places.
  - Before grading, cover the names of all of the students with post it notes so you don't look at the names while grading.
  - When grading, don't use a standard color like blue or black, and don't use a standard pencil- use colored pencils or different colors of ink. You want your written comments to stand out from the student's writing. Also, you don't want students to be able to reproduce or change what you wrote.
- If there is a case of plagiarism, report it to the professor immediately.

## Tips for TA-ing

- Be flexible. Lesson plans don't always go the way you expect; sometimes some activities take a little longer, or a bit shorter. Have backup plans.
- Don't just do the bare minimum of work-- volunteer to give a lecture or teach a class by yourself. You can put this on your CV as experience.
- As with everything, the more you put into it, the more you will get out of it. Always reflect on your teaching and figure out ways to improve.

## Overview of the Classes You Can TA

### Full Semester Classes (Each counts for one TA credit)

- ENT 202
  - This class is an introductory class to the world of entomology, geared towards undergraduate students of all majors. There are typically 100+ students and up to 5 TAs. There is no lab portion-- only a lecture. This class is offered in the spring and in the fall, and each section is taught by Jared Ali or Kelli Hoover. Duties of TA-ing this class include attending every lecture and grading. The main project is "Bugs in the News", where students have to find a news article about insects and write an essay

summarizing the paper and offering a critique, discussing the paper's importance and relevance. This assignment is broken into several smaller portions (finding the article, first draft, final draft), and you will have to grade each of those portions.

- ENT 222: Honey Bees and Humans
  - This is a lecture-based course that fulfills a general education requirement so it is geared towards undergraduates who either are from non-science backgrounds or have yet to pick a major. The class includes approximately 70 students. Typically, this class has two TAs whose duties are to grade the Question of the Day, help with grading of exams, hold office hours, and conduct review sessions for all quizzes and exams. The professors who teach this course are Harland Patch and Christina Grozinger.
- ENT 432
  - This class is taught by Andrew Deans. Since this is a required class for all entomology graduate students, you will probably already have taken the class. There are usually 12-16 students, and you will be the sole TA. Although this class is geared towards graduate students, there are usually a few interested undergraduates as well.
  - Duties of this class include attending every lecture and managing the laboratory portion, where you will set up the lab for the day, supervise students and help them identify the distinguishing characteristics of each family. It helps to review the defining characteristics of each family ahead of time so that you can help students better. You will also set-up, administer and grade laboratory practicals. There is one field trip where you will be spending the weekend with the class at the Powdermill Nature Reserve to collect insects. This field trip is usually during the first weekend of September.
  - The main project of the semester is assembling an insect collection, which the students do outside of lab for the most part. Students will borrow equipment from the Frost to build their collections, as part of your TA duties you will have to keep track of equipment loans and make sure that students return equipment by the end of the semester. There is an equipment sign-out sheet for this purpose, and Andy can show you where the collecting supplies are.
  - This class is one of the most intensive and involved classes to TA, so be prepared and stay organized. It is also one of the most fun and rewarding classes to TA, because you are helping to train the future entomologists in our department!



- ENT 457 (AGECO 457) Principles of Integrated Pest Management
  - This class cross listed in Entomology and Agroecosystems, and is taught by Beth Gugino (Plant Pathology department) and Edwin Rajotte (Entomology department). The class is TA-ed by one or two graduate students from either entomology or plant pathology (PPEM). The class is geared towards upper-level undergraduates and graduate students. It is a capstone course in plant science, meaning that students should be able to assemble knowledge from other, previous courses as well as IPM to understand and solve complex IPM problems. In addition to lectures, there are several field trips, group discussions and a semester-long project that is addressed by a student team. There is a semester-long project that requires students to analyze and make recommendations for a real IPM situation. This includes extensively interviewing stakeholders, visiting sites and reporting by creating a video and term paper. The role of the TA is to manage 5-7 quizzes, evaluate field trip reports and help correct exams and project reports. TAs are usually engaged before the semester begins to help in logistical planning, etc. In addition, the TA is encouraged to give a lecture and participate in final grade decisions.
- ENT 518 Natural History
  - This is a five-day lecture and field course taught in August at the Sieg Center in Lamar. The instructors are Julie Urban, Shelby Fleischer, and Ruud Schilder. The purpose of the course is to teach students about insect collection techniques, natural history of Pennsylvania, agricultural systems, integrated pest management and aquatic systems. Students will learn insect identification and assemble their own insect collections.
  - There is a senior and a junior TA, and the only way to be selected to TA this course is if you are chosen by the senior TA. You get 1 TA credit for each time you TA the course, so you have to TA the class twice, once as a junior TA and once as a senior TA, to fulfill your departmental requirements. There is a lot of preparatory work in the weeks before the course, and while the course is running you are expected to be there for all four nights and five days. Be ready for anything, because this is not a traditional TA position.

### Half Semester Classes

These classes are only 6 weeks long and count for half of a TA credit, so you will need to apprentice another 6-week class to count for a full credit of teaching.

- ENT 313
  - This class is taught by Tanya Renner. The class is geared towards undergraduates who major in agriculture, though there can be a mix of undergraduates from different departments. The class includes up to 24 students. You will TA this class with other TAs, usually a mix of apprentice TAs and one or two experienced TAs. You only need to attend the labs, not the lectures, but you and the other TAs will be managing the lab.
- ENT 314 Management of Insect Pests of Ornamentals
  - This class is a lab that meets once a week and usually has 10-20 students (the afternoon section is usually bigger). Each section has just one TA, but the instructor is there most of the time. Charles Mason has been leading the course for the last two years and has made a lot of changes to it.
  - An average class day will start with a short lecture, then students will break into groups to work on a worksheet related to the day's lecture. The TA presents the lecture and helps answer questions for the students as they do their worksheets. Along with the worksheets, there are a handful of quizzes and an end-of-class group project which the TA grades. The best thing for the TA to do for each class is familiarize himself/herself with the worksheet and think of any key questions the students may have.
- ENT 316: Field Crops Entomology
  - This is geared towards students working with or interested in agronomic crops (corn, soybean, small grains, hay, forages). Students are usually majors within the Plant Science Department, but some may also have a minor in Entomology. Typically, two graduate students will work together to instruct this class. Class meets weekly for two hours during the second half of the semester. John Tooker has supervised it for a number of years but gives the TAs independence and does not attend every class. TAs are free to revise included material, redesign presentations, or try new activities as they see fit. Typically, each week focuses on common pests or other insects found in a particular crop, starts with an informative presentation, then finishes with activities to help cement the information learned. There is a weekly quiz on last week's info, as well as a worksheet during the activities. There is a debate on a controversial topic in agronomy (usually GMO usage). The semester concludes with a group presentation on developing an IPM plan for a real-world pest problem a grower might face.

## Teaching Certification Courses

### The Graduate School Teaching Certificate

For those who are interested in teaching and would like more experience and professional development in this area, Penn State offers the option to earn the Graduate School Teaching Certificate. There are five requirements, which involve taking the [Schreyer Institute New Instructor Orientation](#), TA-ing two courses (two semesters of SUBJ 602 Supervised Experience in College Teaching), taking either the [Schreyer Institute Penn State Course in College Teaching](#) or HI ED 546 College Teaching, and creating a website with a statement of your teaching philosophy and a PowerPoint presentation you designed. More information about this can be found at:

<http://gradschool.psu.edu/current-students/tacert/> The checklist for requirements for the certification can be found here:

<http://gradschool.psu.edu/current-students/tacert/teaching-certificate-checklist/>

### The Graduate Student Online Teaching Certificate (GOTC)

This is a free, non-credit course open to all graduate students for the purpose of learning how to teach courses online. This is a different and separate certification from the Graduate School Teaching Certificate. The course is open every Fall. More information is available here: <https://sites.psu.edu/2016gotc/>

### Other resources for teaching

Collins, A., & Halverson, R. (2009). *Rethinking education in the age of technology: The digital revolution and schooling in America*. Teachers College Press. 176pp.

## Research and Data Management

### Getting Started

When getting started in your lab, ask your advisor if there are any important papers or resources in your field that you should be sure to know.

Here are some good resources all entomology students should check out:

- *Insects: An Outline of Entomology* by P. J. Gullan and P. S. Cranston
- *Principles of Insect Morphology* by R. E. Snodgrass
- *A General Textbook of Entomology* by A. D. Imms
- *The Insects: Structure and Function* by R. F. Chapman

- *An Introduction to the study of insects* by D.J. Borror, D.M. DeLong, and C.A. Triplehorn

## Reading Broadly

It's crucial to keep up-to-date with the literature in your field. With so many journals specialized for so many fields, this can be difficult to do. Ask your advisor for journal suggestions and be sure to keep up with the journals that your advisor and members of your lab publish in-- you will likely be submitting publications to the same journals in the future.

Below are some suggestions for good journals all entomologists should browse through:

- Published Weekly:
  - Nature
  - Science
  - Proceedings of the National Academy of Sciences (PNAS)
- Published Monthly:
  - PLoS ONE
  - Evolution
- Entomological Society of America Publications: There are several different journals. Some of these are published monthly, while others may be published only once or a few times a year.
- One way to keep up-to-date with new publications is by using Google Scholar alerts. You can create "alerts" for specific keywords, and any time an article containing that keyword becomes available on Google scholar, you will get an email message telling you about it. If you have a Gmail account, then log in, go to google scholar, and click "Alerts" at the top of the screen.
  - Another good program that works in a similar way is PubCrawler.

## Reference Managers

With all of this reading, you will have a lot of journal articles to save and keep track of. We recommend using a reference manager to do this. You can pay for one, but there are also several free options to choose from. Reference managers are great for organizing your articles, and can also be linked into writing platforms such as Microsoft Word to insert citations and automatically generate reference/works cited sections.

Here are some suggestions:

- Zotero
- Mendeley

- Endnote

OneNote and Evernote are also great resources for organizing your notes on papers.

## **Tips and Strategies for Reading and Keeping Up with the Literature**

Even though reading and keeping up with the literature is such a crucial part of doing science, it can often be forgotten in the wake of everything else we have to do.

Here are some key strategies for keeping up with the literature:

- **Build reading papers into your schedule.** Set apart a certain amount of time a day (do one hour of reading a day or read one paper a day), or devote one afternoon a week to going through the literature.
- **Instead of staying in your lab, go to the library** and spend a certain amount of time looking at different journals. This is a good way to avoid distractions.
- **Talk to your advisor.** Tell your advisor what papers you are reading and ask what your advisor is reading. This is a great way to find out about important papers.
- **Divide and conquer.** You can start a journal club within your lab or ask your advisor to incorporate discussion of papers into weekly lab meetings. If everyone reads one paper and discusses it, then you can all learn something and stay up to date. There is too much literature for one scientist to read, so work together!
- **Subscribe to paper alerts** from sources like Google Scholar and PubCrawler, as well as publication alerts from journals that are relevant to your field or that you intend to publish in.
- **Find a reference manager you like** and use it to keep track of papers and notes.
- **Read outside of your field.** Discoveries are often made at the intersection of different fields-- don't be afraid to read something not directly related to your research.
- **Don't be afraid to re-read papers.** Every time you read a paper, something new will stand out to you.

## **Keeping a lab notebook effectively**

- When keeping a lab notebook, keep in mind that others will be reading it too. It's not just for you-- it's for other people who want to see what you did and replicate your work.

- Keep different lab notebooks for different projects or different types of projects (ex: one for molecular work, one for morphological/specimen work, etc.) Print out the protocols or procedures that you follow for the experiment and tape them into your lab notebook.
  - If you create your own protocols and procedures, you can publish them on figshare and cite them in your publications
- Get into the habit of writing everything down on the same day that you did it.
  - If you like typing your notes instead of writing them, then print out the notes and tape them into your lab notebook.
  - Also tape in any important datasheets, results, pictures, etc.
- It's helpful to have a "table of contents" in the front of the notebook with page numbers for easy reference.
- Anytime you finish a lab notebook, scan it into a pdf (there are free book scanners in the library) and keep an electronic backup with your other data in case anything happens to the original notebook.

### **Managing Files on the computer**

- As with your lab notebook, keep in mind that others will be reading your files too. They are not just for you-- they are for other people who want to see what you did and replicate your work.
- In any spreadsheet file you make, be sure to dedicate one sheet to explaining what's in the file (i.e. what is on each sheet in the file, what you did, how the file is organized, dates, any abbreviations that are used, color coding, etc.). Name this sheet "READ\_ME" so people who look back at your project will read that first and understand what the file contains.
- When saving data files, be sure to include the date and the name/type/subject of the project.
- **BACK UP EVERYTHING!**
  - Back up your work regularly, on all of the types of data backup that you use.
  - Penn State Box is offered to all Penn State students, and functions like Dropbox. Every student is given 1 free terabyte of data.
  - Back up your data in multiple places. Use both online backup resources (Google Drive, Dropbox, Penn State Box, etc.) and external hard drives to back up your data. If you back up to multiple external hard drives, make sure they are kept in different places; if something were to happen (fire, flood) you don't want to lose them all.

## Collecting Insects and Handling/Storing Specimens

- Talk to your advisor about what permits and permission you need to do your research.
  - Here is a useful blog post written by Andy Deans about permitting and where you can collect insects in Pennsylvania:  
<http://sites.psu.edu/frost/2017/05/17/collecting-insects-in-pennsylvania/>
- All specimens you capture must be stored and labeled properly. You will learn about proper insect handling/storage techniques in ENT 432, and you can always contact Andy Deans for help ([adeans@psu.edu](mailto:adeans@psu.edu)).
- **Don't throw your bycatch away.** This is a tremendous waste of insects that other researchers can use. Ask others in the department if they can use the samples, or consider donating them to the Frost Museum so the students in ENT 432 can use them.
- Deposit all of your voucher specimens at the Frost Entomological Museum when you are done with them-- don't just leave them lying around where they can be damaged or lost. Again, contact Andy Deans for help ([adeans@psu.edu](mailto:adeans@psu.edu)).

**Plan ahead and make good habits now -- actually set aside time to do this. Don't make data organization an afterthought!**

## Laboratory Safety

Anyone working in a laboratory at Penn State is required to take laboratory safety training, which is available online at the Penn State Environmental Health and Safety (EHS) website, <http://ehs.psu.edu/>.

New students need to take the University Park Laboratory Safety (Initial), which consists of an online portion and a half-hour review session. This is a one-time requirement. You can access it at <http://ehs.psu.edu/>: click on training on the right-hand side of the page, log in, click on Courses> Laboratory Safety and Laboratory Hazard Communication, and select the University Park Laboratory Safety (Initial).

After taking the initial training, you need to take the laboratory safety refresher once a year. You can access it at <http://ehs.psu.edu/>: click on training on the right-hand side of the page, log in, click on Courses> Laboratory Safety and Laboratory Hazard Communication, and select the Laboratory Safety Refresher.

After each safety course, you will receive a certificate-- make copies and then add a copy to the laboratory safety binder kept in your lab. All laboratories have a binder

with laboratory safety protocols and MSDS (Material Safety Data Sheets) for each chemical substance used in the laboratory.

You may have to take additional safety courses depending on the kind of work you do (i.e. bloodborne pathogen training, pesticide application, etc.) or the kind of equipment you work with (i.e. if you work with the confocal laser scanning microscope, you must take the laser safety training). Your advisor and the equipment technicians can give you more information about what safety training is required.

For graduate students working at the research farm(s) in any capacity, there's an additional training called the "Annual Ag Safety Training for Summer Workers". Any undergrads employed by you/your lab need this too. It occurs in June on campus in the Meats Lab for ~3 hours: <http://agsci.psu.edu/safety/safety>

Be aware that EHS does laboratory inspections every January.

#### **In the event of an emergency:**

- Call 911 for Fire or Accident
- Call Environmental Health and Safety (EHS) 1-865-6391 for lab safety, radiation safety, chemical and bio safety (e.g. chemical spill/clean up)
- Call the Physical Plant Service Deck (Opp) 1-814-865-4731 or University Police 1-814-863-1111 for building or utility problem.

All these numbers are posted on the door of each lab. Please report emergency and lab safety issues immediately to get help.

Our departmental safety officer is Dave Love; you can contact him at [dwl2@psu.edu](mailto:dwl2@psu.edu) or 1-814-863-2875.

#### **Ordering Laboratory Supplies**

The main ways of ordering supplies are through Ebuy or through the use of purchasing cards (PCards). Different labs have different policies about who can order materials. Speak to your advisor to find out what your lab's policy is.

#### **Ebuy**

Penn State's Ebuy is an online ordering site that can be found here <http://purchasing.psu.edu/ebuy>. Ask your advisor or whoever is in charge of each account for the account information and access.



### How to Order Supplies Through Ebuy

1. Go to Ebuy and log in.
2. Select the account you want to charge your purchase to. Ask your advisor or whoever is in charge of the account for access.
3. Click through, and you will end up on the Ebuy homepage. Now you can search through the Ebuy catalogue using the search bar.
4. If you're ordering something that isn't from the catalogue, then go to "non-catalogue". A new window will pop up.
  - a. Enter in the supplier you are ordering from. It should appear in the scroll-down menu.
  - b. Then enter in the catalogue number for the item, the item description, the price per item, and the quantity of item you are ordering. You will also have to select what kind of item you are ordering from the scroll down menu.
  - c. Note: You cannot order catalogue and non-catalogue items in the same order. You will have to order separately in this case. You will also have to place separate orders if you are ordering non-catalogue items from different shippers.
5. When you're ready, hit check out, then go to summary.
  - a. Under summary, go to account string and hit edit.
  - b. A new window will pop up. Under Dept. free space, put in the account you want this to be charged to, like "please charge to teaching account for ENT \_\_\_\_"

### How to Order Ethanol on Ebuy

Since this is a product that is regulated by the PLCB (PA Liquor Control Board), it needs to be ordered in a very specific way.

- 1.) Login to Ebuy
- 2.) From the main ordering screen, click on the VWR vendor icon to take you to a punch-out through the website.
- 3.) On the left-hand side of the screen, click on the link that says "Custom Catalogs."
- 4.) In the center of the screen, click on the green link that says "VWR On-Campus Stockroom."
- 5.) Select your ethanol and entering the quantity on the right-hand side.
- 6.) Once done entering your quantity, click "Add to Basket" on the bottom of the screen.
- 7.) Click the checkout button (it is a very small wire basket near the upper right-hand side of the screen) and complete your order.

8.) Proceed to finish your order through Ebuy.

### **Purchasing Cards** (<http://purchasing.psu.edu/purchasing-card>)

Depending on the lab you are in, your advisor may allow you to use a purchasing card or PCard, which can be used at local stores and online. When using a PCard, the purchase must be tax-free.

All PCards must be reconciled within 30 days of purchasing. If you are using the PCard to cover travel related costs, then the PCard must be resolved within 60 days after you return from travel. If you don't reconcile your PCard purchases, you risk having the card cancelled or taken away. Ask the Entomology Department office for the most up-to-date forms.

### **PCard Beginners Guide**

After passing the Purchasing Card Training for Good/Services and Travel online (<http://purchasing.psu.edu/purchasing-card>) your request for a Purchasing Card will be submitted through the department. The turnaround time for cards is typically 4 weeks. There are currently two systems used for reconciling PCard Charges; Concur (Travel/Group Meal System) and IBIS (Goods and Services). The PCard Support Form is used in processing Goods and Services Charges while the Employee Travel Reimbursement (CONUS (in county travel) or OCONUS (outside of Continental US Travel)) and Group Meal Forms are used in Concur.

### **Tax**

Penn State is a tax-exempt University; when purchasing, please indicate that to vendors. We do have a Tax Exempt Letter and Exemption Certificate (PA, FL, RI & TN). Our Federal ID # is 24-6000376. If a charge to the PCard has tax assessed we will be returning the backup to you requesting the PCard Holder have the taxed amount credited to the card. Charges with tax will not be reconciled unless the tax is taken off. Once a credit for the taxed amount is requested you will need to submit an additional PCard Support Form to have on file for the credited amount.

### **Statements**

You will receive monthly statements from PNC Bank that you are required to keep (signed & dated) the current year/month plus 12 months. With each statement you receive it is encouraged that you check for fraudulent charges to the card. If you find

you have fraudulent charge, flip over your statement and follow the directions for disputing unlawful charges

## PCard Tutorial

Please follow the provided link to the Purchasing Card Online Tutorial:  
<http://purchasing.psu.edu/getting-card>

You will want to take the tutorials for both Goods and Services and Travel. Please notify Lesley Heller-Guenther with your confirmation of the completion of tutorials email.

## Submitting Your PCard Support Form

### Keep in mind when submitting:

- Receipts must be *detailed* (showing date of purchase, vendor name, breakdown of what was purchased, last 4-digits of PCard)
- Backup should be submitted to our office as quickly as possible following the purchase, PCard Charges should be submitted within 30 days of the transaction date.
- Receipts must be *signed and dated* by the cardholder
- You must have the following sections filled in: *Vendor Name, Detailed Description, Detailed Purpose, Budget, Fund, Amount, Cost Center, Sub-Object.* (if you are unsure of Budget/Fund information please ask)
- If you work across departments or even colleges you should always submit your PCard Backup to the department that your PCard was issued through (in this case Entomology!).
- The individual transaction limit for goods and services is \$2,000.00, daily limit of \$7,000.00 and Cycle (30 day) limit of \$10,000.00. Travel limits are only different for the individual transaction which is \$3,000.00.
- You are not permitted to split charges in order to circumnavigate transaction limits. If a transaction is over the limit you can reach out to the Colleges Financial Officer, to temporarily have your limit raised. Another option is to work with our departmental Financial Assistant, Sherri Taylor, [slt24@psu.edu](mailto:slt24@psu.edu), to do a Purchase Order.
- Be sure to print your (cardholder) name, sign and date the Support Form.
- If a vendor cannot issue you an itemized receipt you will need to fill out a Lost or Unobtainable Receipt Form that must be signed by you, the Principal Investigator, Department Head and Financial Officer. Lost Receipt Forms should be submitted to me along with the PCard Support, Group Meal or Travel Form associated with the charge.

- If you have lost your receipt and have made every effort to obtain a new one from the vendor, you will need to complete a Lost or Unobtainable Receipt Form (following the above instructions). *We understand that there are instances where an actual receipt/detailed receipt can't be obtained, in such a case we usually won't dock you for use of the Lost Receipt Form.*
- If you have more than 2 lost receipt forms with a Fiscal Year (July 1<sup>st</sup> through June 30<sup>th</sup>) you are subject to loss of PCard use indefinitely.

**When filling in the “Detailed Purpose” section, follow the ‘The 5 W’s’ guideline**

- **Who** (*who is using the goods purchased?*)
- **What** (*detail what was purchased*)
- **Where** (*where is it used?*)
- **When** (*how long/when will use begin*)
- **Why** (*how will this benefit the University/Research Project?*)

*\*Please contact your administrative unit for up-to-date forms*

Using the PCard on Amazon.com

The University now requires that employees create a verified user account through the University’s Amazon business account. You cannot set up an Amazon tax-free account by yourself. Go to the Department of Entomology office for help.

## **Grants, Awards and Grant Writing**

### **Finding Grants and Awards**

There are many different grants and awards that you can apply for:

- Sigma Xi (done as part of ENT 522 Critical Thinking and Professional Development): <https://www.sigmaxi.org/programs/grants-in-aid>
- Penn State Department of Entomology Awards: <http://ento.psu.edu/graduateprograms/funding/departmental-awards>
- Penn State College of Agricultural Sciences Awards: <http://agsci.psu.edu/research/resources/funding>
- Northeastern SARE Graduate Student grant: <http://www.nesare.org/Grants/Get-a-Grant/Graduate-Student-Grant>
- Pollinator Advocate and North American Pollinator Protection Campaign (NAPPC) awards: <http://pollinator.org/awards>

- American Association of University Women (AAUW) offers fellowships and grants to women: <https://www.aauw.org/what-we-do/educational-funding-and-awards/american-fellowships/>
- National Science Foundation Graduate Research Fellowship Program (NSF GRFP): <https://www.nsfgrfp.org/>
  - There is also a class called AEE 597 – NSF-GRFP Fellowship Preparation that helps graduate students apply for this grant. It is offered every fall.
  - NSF also has a Graduate Research Internship Program (GRIP), which offers internships in federal agencies to NSF GRFP fellows. You can find out more here: <https://www.nsf.gov/grip>
  - You can search through other NSF funding opportunities here: <https://www.nsf.gov/funding/index.jsp>
- The Sparrho Early Career Research prize, which grants PhDs and postdocs in any field up to \$650 USD to travel to a conference and present your work. The submission deadline is the last day of every month, and award winners have their research featured in the Huffington Post. Details [here](#).
- There are also travel awards and grants offered through ESA and other professional societies-- check out their websites for more information.
- If you are traveling to a conference, you can often volunteer at the conference to have your registration fees reduced or waived entirely. You need to sign up to volunteer ahead of time-- check the conference website to see if this opportunity is offered.

## Writing and Preparing Grant Applications

When preparing a grant, read all of the instructions carefully! There are often hundreds of applications for each grant, and one of the ways reviewers sort through these applications is by discarding any that did not follow the guidelines.

The best help for writing grants is to look at grants that have successfully gotten funded. Ask people in your lab and in the department about what grants they have applied for and won; they will be able to give good advice on how to write a successful grant. Also check the website for the grant you are applying for. Grant organizations often post examples of grants that have been funded in former years.

You can sometimes find examples of successful grant applications on figshare (<https://figshare.com/>). Likewise, if you have gotten any grants funded, you can publish your grant application on figshare. This is a great way to help future applicants, as well as putting your work in a format that can be cited.

NSF grants often want a list of broader impacts. Penn State has a helpful website (<http://broaderimpacts.psu.edu/>) that provides an overview of NSF's Broader Impacts requirements, lists resources available in the college and elsewhere to assist faculty with designing Broader Impacts, and gives some examples of successful Broader Impacts.

### **Penn State Office of Grants and Contracts (OGC)**

When applying for large grants on the state or national level, you need to work with the Penn State Office of Grants and Contracts (OGC). **You will need to meet with them at least a month ahead of time, so plan accordingly!** The OGC can get very busy, so you need to be proactive about emailing them and following up to ensure your grant is prepared in time for the deadline. If your grant is successfully funded, there is a lot of paperwork to fill out before you can access money so be patient.

If you give the OGC sufficient time, they will make complicated paperwork very simple for you. Thus, it is more than worthwhile to be kind to them and make their jobs easy. You can find out more about the office and grant funding process here:

<http://agsci.psu.edu/grants>.

### **Outreach**

Aim to do at least one outreach event a semester-- this comprises an important section on your CV. Keep track of all of the outreach you do and put it in your CV.

#### **Tips for Outreach**

- When teaching and interacting with the public, don't just do what everyone else does. Kids tend to hear the same things over and over again, but what they want to hear is something new. Tell them about new discoveries you've made or learned about. Tell them stories about your research and about unexpected findings. What captures people's attention is the unexpected, not the predictable.
- When communicating with the public, simplify but don't dumb down. People can understand complex methods and concepts; what they lose interest in is jargon, acronyms and excessive detail.
- Make sure your language and outreach are appropriate for the age group you are interacting with. Modify your outreach based on the age of the people you are talking to, whether they are elementary school students or adults.
- When you do outreach, ask a friend to take pictures of you interacting with the public, especially with children. This is very useful for professional development; some organizations look specifically for K-12 outreach.

- Be aware that things don't always go the way you plan-- sometimes people might interpret things in a way you don't expect. Remember that when you do research, your actions don't just represent yourself but also the department. Be careful of what you say, especially if you are being interviewed or filmed.
- Be flexible. Have contingency plans and backup plans. Always reflect on your outreach and figure out ways to improve and what you could have done better.

Again, don't be afraid to go above and beyond what is expected of you. Design your own outreach activities, and try new things. The more you put into outreach, the more you will get out of it. Eberly College of Science offers a great class on improving your outreach and communication skills (SC 497) that provides lots of guidance and some funding to design a targeted outreach lesson.

If you want to get more involved with departmental outreach, consider joining the great Insect Fair Committee, Bug Camp Committee, or EGSA Outreach committee. Our department gets several requests from schools, camps, parks and more throughout the year, so there are many opportunities to do outreach!

### **Training and Supervising Undergraduate Assistants**

Depending on your lab and funding, you may be able to hire and train undergraduate assistants to help you in your research. This is great for your professional development, as well as for theirs.

#### How to Pay/Support your Undergraduate Assistants

If you have funding for this in your lab already, great! If you are writing a grant to fund your research, consider budgeting for student assistants. This can be a big portion of project costs but well worth it. Don't forget to consider fringe and other associated costs when budgeting for student labor. The Office of Grants and Contracts can help with this if you're unsure.

Not all undergraduate assistants are paid; some undergraduate assistants will do work in exchange or course credits, and others may volunteer in exchange for research experience and a recommendation letter.

There are also grants and scholarships that your students can apply to for support. Some examples include:

- The Apes Valentes Undergraduate Research Award for research in pollinator biology and health. Successful candidates will receive an award of up to \$4500 to

be applied to wages and other project costs. Check out more here:

<http://ento.psu.edu/pollinators/publications/apes-valentes-undergraduate-research-award>

- Sigma Xi, which is open to both graduate and undergraduate students:  
<https://www.sigmaxi.org/programs/grants-in-aid>
- The Science Ambassador Scholarship is full tuition scholarship for women in STEM, funded by Cards Against Humanity! Find out more at:  
<http://www.scienceambassadorscholarship.org>

## How to Find Assistants

If your assistant will be paid, you need to go to the Entomology department office to get the forms to create the job and have it posted on the Penn State Job listing board (<https://psu.jobs/>). This is where applicants can apply for the job and upload their resumes, CVs and cover letters as well.

To find undergraduate assistants, never underestimate word of mouth. Talk to others and tell them you are looking for someone. Ask professors other graduate students if they know of any good undergraduates who are passionate about research and looking for experience. You can also ask students in the classes you TA if they are looking for a position.

You can also advertise a position by putting up fliers around campus, such as the cork boards in ASI, Mueller, MSC, The Forest resources building, the Library, Schreyer Honors College. Think of the types of applicants you want to hire, then think of where they would spend time and put fliers there. Having rip-away tabs on the bottom of the flier with your labs contact information is a good idea.

## How to interview assistants

You can log into the Penn State job site (<https://psu.jobs/>) to sort through applicants and look through their cover letters and resumes. If you have a lot of applicants, ignore those who did not submit a cover letter or resume (you have no way of gauging their abilities and interest without these things!). If prior entomology experience is essential, look for that but don't be afraid to hire students from outside relevant fields.

Evaluate who you think is the best fit for the position, then contact them and invite them in for an interview. During the interview, ask them what experience they have, what their goals in the future are, why they are passionate about the job and what



they hope to get out of it, and anything else relevant to their ability to do a good job in your lab. You should also explain to them the type of work that they will be doing and what will be expected of them.

If they will be doing molecular work or other work that is intensive and detail-oriented, you may want to invite them in for a day and do extractions/PCR/etc. with them to see if they are capable of doing that kind of work.

After you choose an assistant, you will need to do the follow things.

- Get the appropriate paperwork from the Entomology department office for hiring and paying your assistant. Also ask about closing the job listing on the Penn State Jobs site.
- The assistant will need to take the safety course if they will be working in the lab, which can be accessed here: <http://ehs.psu.edu/>
- All students (graduate or undergraduate) working at the research farm(s) in any capacity also need additional training called the “Annual Ag Safety Training for Summer Workers”. It occurs in June in the Meats Lab on campus for ~3 hours. <http://agsci.psu.edu/safety/safety>

Tips for Supervising and Training Undergraduate Assistants

- Have a plan for how you will train your students on a task and check their work. Stick to it. You’ll be grateful later!
- Don’t trust immediately that they will do something correctly. Even great students can make mistakes.
  - Create an atmosphere where students are comfortable sharing their mistakes and will let you know immediately if any problems occur. Mistakes are much easier to fix early on-- you do not want to be in the last stages of data collection or analysis before you find out about them.
- Communication is key:
  - You have to be on the same page as your assistant.
    - Having a written protocol for them to reference is helpful. You should also have a system for how they/you will record what they did. It should adhere to the same standards as your own lab notebook since they are contributing to your research.
    - You may want to write up a code of conduct or statement of mutual expectations for your assistants so that everyone is clear on what is expected of them.
  - You and your advisor should also be on the same page. You should work out the following questions ahead of time: What tasks should you do vs.

what can they help with? Who will sign their time cards? Who do they report to if they have an issue?

- Have projects for them to work on, and give them credit for their work. Thank them in the acknowledgements sections of your papers and presentations for any projects they helped out on. If they did a substantial amount of work on a project, you should make them a co-author.
- Write recommendation letters and give them opportunities to learn new things, increase their own skill sets, and advance their own careers. You are there to help your assistant develop themselves professionally; they are not just there to help you.

### How to Fire Unhelpful assistants

You should be having daily conversations with your undergraduate assistant about your expectations and giving them feedback on what they are doing right or what still needs to be done. If there is a problem, talk to your advisor before you do anything else, then schedule meetings with both your advisor and the assistant to tell them what needs to be done and what improvements or changes they need to make. You need to be clear about what your expectations are and whether or not they are being met, as well as what steps need to be taken in order to fix the situation.

Make sure to document these conversations, either through emails or meeting notes. You can even email a synopsis of what you talked about back to the assistant. This creates a record and a second form of communication the assistant may retain better. You will need documentation to fire someone.

If you've been clear about expectations and they are not meeting them, you can use this as explanation if you need to fire them. Some labs have a written document for what is expected while at work and will have undergraduates sign off on it. This gives you a metric for deciding if they're meeting expectations or not. It is very hard to say they haven't met expectations if you haven't outlined them, so make sure you are clear from the very beginning when you first hire them.

### Writing and Publishing Manuscripts

There are many different outlets for your work to be published in. Your advisor and other members of your lab will be able to give you the best advice on what journals to publish in. Generally, you don't want to publish all of your papers in the same journal.

Try to publish in a few different journals to show that your research has a broad scope and applications.

Different publications have different impact factors, and higher impact factors look good. Be aware of the impact factors of the journals you publish in, and try to publish one or more of your papers in a journal with a higher impact factor as a testament to the quality of your research.

### **General Tips for Writing Manuscripts**

The only way to finish grad school is by writing. Here are some useful tips and strategies for writing to help you on your way:

- Write regularly. Try to set aside one hour every day for writing.
- Create a separate document for each of your projects/chapters/future manuscripts. As you read relevant papers and do your research, you can add your notes and findings directly into that document. Then, when you finally sit down to write the manuscript, you will find that you already have a lot of material to draw upon.
- You can start writing the methods sections of your paper while you are doing your methods. Don't be afraid to start writing early!
- Don't get lazy with citations. When you cite sources, you show how well-read you are and how well you know your sources, so always cite reputable sources, and don't plagiarize!
- Always give yourself enough time to write the manuscript so you do it properly. When you rush, the quality of your paper suffers and you are more likely to make mistakes, such as accidentally plagiarizing or not citing a source.
- Finally, try different strategies for writing. Some people write better in the mornings, while others are more productive at night. Some write each section in order, while others work on multiple sections at once. One method is not better than another-- the best method is what works best for you, and the only way to figure this out is by trying different strategies and seeing what works.

A useful resource for academic writing and productivity is *How to Write a Lot*, by Paul J. Silvia.

### **General Tips for Editing Manuscripts**

When editing your paper, check the following things:

- Do the sentences flow? Do they make sense?

- Is the writing clear and concise? Or is it overly wordy and full of jargon? What can you simplify?
- Is there anything unnecessary in the text? Are there things you should take out or add in?
- Are the figure numbers correct?
- Are all the sources in the paper also in the references list?
- Look at your paper with a critical eye. Remember all of the things that you looked at and criticized about your candidacy paper? Look at the same things in your own paper and make sure that you don't make any of the same mistakes.
- Is the grammar correct? Are the tenses consistent? Check subject-verb agreement, look for run-on sentences. Read your paper out loud to help you find these things.
- Data is plural-- i.e. "these data", "the data are", etc.
- If you are not a native English speaker, it might help to have a native English speaker look it over.
- Ask someone with a different research specialty to look over your manuscript-- this can give you a better idea of how understandable your writing is to a general scientific audience. You can ask others in your lab or in the department. Journal club will also help you review your manuscripts.

### **Submitting Manuscripts and Preparing Cover Letters**

Some journals require a cover letter when you submit a manuscript. Here is a typical letter you can use as a model:

Dear (insert name of journal editor),

Attached is our manuscript "(insert title of manuscript)" by (insert names of authors). This manuscript is being submitted for publication as a research article in the (insert name of journal).

We confirm that this manuscript has not been published elsewhere and is not under consideration by another journal. All authors have approved the manuscript and agree with its submission to the (insert name of journal).

Thank you for your consideration!

Sincerely,  
(your name)

### **A Note on Open-Access Publications**

Open-access publications are those that are available for free to anyone who wants to read them. Papers that are not published with an open access option generally

require either a subscription to read them, though papers can also be purchased individually or rented for a short period of time for a fee.

Different people will have different opinions about whether you should publish your papers open access or not. Not all journals will offer the option to publish open-access. While it does cost more to publish papers open-access, it ensures that all of the data you are generating is communicated, and that the science you are doing is open to everyone. Talk to your advisor about the best option for you and your research.

### **Publishing Your Protocols and Raw Data**

Websites such as figshare (<https://figshare.com/>) and ScholarSphere (<https://scholarsphere.psu.edu/>) are great resources for scientists to communicate their work with other researchers. It's free to make an account on these websites, and you can publish materials related to your research for free. When you publish something on figshare or ScholarSphere, you get a DOI, which allows you to cite products of your research that normally wouldn't be made available, such as protocols or raw data. The data on these websites are not peer-reviewed, but it is still a useful resource for helping other researchers while also getting credit for your work.

ScholarSphere is a research repository service created and offered by the University Libraries and Information Technology Services that allows Penn State faculty, staff and students to share and manage their research with a worldwide audience. For more information, or if you have questions about ScholarSphere, please email [scholarsphere@psu.edu](mailto:scholarsphere@psu.edu). A member of the ScholarSphere service team will respond to your message.

### **Other Types of Writing: Blog Posts, Press Releases, etc.**

Not everything you write has to be a journal article. If you are interested and enjoy writing, there are a lot of opportunities for generating scientific content, from blog posts and press releases to book reviews and magazine articles. There are several great reasons to do this:

- You can help inform the public and make sure that voters are knowledgeable about important issues. Besides, what is the value of a scientific discovery if no one knows about it?
- Grants often want an outreach component, and maintaining a blog or writing for non-scientists is a form of outreach.

- It's a great way to gain experience, build up your skillset and CV, and get your name out there!

#### Tips for Writing for the General Public:

- Simplify but don't dumb down. People can understand complex methods and ideas; what they lose interest in is jargon, acronyms and excessive detail
- Start with something surprising that captures the reader's attention, such as an unexpected finding or something that didn't go the way it was planned. People are drawn to the unexpected.
- Aim for brevity and omit unnecessary words; don't use several words when you can use one, and don't use a complex word when you can use a simple one.

#### Blogs

Blogs are typically short and informal pieces of writing, but there is a lot of flexibility and freedom with this medium. Some blog posts are just a picture and a few sentences, while others are more like articles. The only way to get better at writing blogs is to write lots of blogs, so practice and see what works best for you.

All blogs need good pictures and a title that captures attention and invokes curiosity. People tend to click on blogs for the pictures and title, but then only read the first few sentences. Your writing needs to be interesting and engaging so people will want to read to the end. Concerning citations: you can add a list of references at the end, but it's better to just add a hyperlink to whatever source you refer to.

You don't need your own website to blog; you can rely on other blogs that are already established. Some examples in the department include the Penn State Entomology website and the Frost Curator's blog, but many labs and student organizations have their own websites and blogs.

#### Press Releases

Press releases inform the public about ongoing research or announce the publication of a new study. You will learn how to write press releases in the Professional Development class required by the department. Press releases are often written by professional writers who are not members of the laboratory, but there is no reason you can't write your own press releases for your own research. This is useful for spreading awareness of your own research. It's also good to write your own because if someone

else writes a press release for you, you risk having your research or findings misrepresented or misreported.

As with blog posts, you want to have an eye-catching title and a good picture. If your press release is announcing a new publication, you should include where the study was done, where it was published, who the lead authors are, and how it was funded (you can put the grant numbers and a citation for the published paper at the bottom of the press release). Read other press releases to see how they are done, and then practice!

### **Professional Societies**

Professional societies are great resources for students. Many professional societies have yearly conferences, which are great for meeting other experts in your field, finding research collaborators, and making important contacts for finding post-docs and jobs later. Many professional societies also offer their own grants and awards, as well as workshops, career resources, and listservs you can contact.

You will need to become a member before you can participate in a professional society. Be sure to choose the student membership option, as this is much cheaper and you will often be paying for membership out of your own pocket.

The largest professional society for entomologists in the United States is the Entomological Society of America (ESA; not to be confused with the Ecological Society of America, which has the same abbreviation). Many people in the department are members of ESA and attend the yearly conference. There are many other professional organizations on the local, statewide, regional, national or international scale. Your advisor can give insight on which ones may be best for you to join.

There are also several professional organizations on campus:

- Graduate and Professional Student Organization (GPSA)
- Penn State Alumni Association (with chapters all over, this is an important job-finding resource)
- Graduate Women in Science (men can join too!)
- And of course, EGSA!

### **Presenting at Conferences and Giving Professional Talks**

Aim to attend and present at one conference a year, at least. Your advisor can recommend good conferences to go to and present at. The largest meeting for

entomologists in North America is the annual Entomological Society of America (ESA) meeting. Every four years, instead of an annual ESA meeting there is a conference for the International Congress of Entomology (ICE).

Before going to a conference, prepare!

- Check the program for interesting talks you want to attend. Make a schedule ahead of time; it will be very busy once you get there.
- Contact people that you would like to talk to at the conference a few weeks ahead of time. Invite them to see your talk, or schedule a time to meet them for coffee and ask them questions.
- Print business cards, and either write or put stickers on them with the time and location of your presentation.
- Make sure your resume/CV is updated. Update your LinkedIn, ResearchGate and any other online accounts of your research and academic work.
- Print copies of your resume/CV to hand out. If you are looking into different types of positions, then you may want to have a different resume/CV printed out for each type.

There may be grants or awards you can apply for ahead of time to cover the costs of registration or traveling. You may also be able to volunteer in order to cover some of the costs, but you need to sign up to volunteer ahead of time. Check the websites of the conference and the professional society hosting the conference for more information.

When attending a conference, dress nicely! It shows that you are serious about what you are doing. Aim for business casual but when in doubt, it's better to look too formal than not formal enough.

- Pick an outfit that you're comfortable in. You want to be relaxed while giving a talk, not distracted by how your shoes are digging into the sides of your feet or how your sleeves do not cooperate with the way you move your arms.
- Pack an extra outfit just in case. You don't want to be stuck if you spill something on your only nice shirt.
- Make sure your shoes are comfortable and worn-in!

### **Tips for Giving an Oral Presentation**

- Make sure you have a good understanding of the papers you cite-- they may be in the audience. Likewise, never insult authors or make derogatory comments about papers.



- Anticipate what kinds of questions you may be asked and plan how to answer them. Even if you don't get asked, it is good practice and will increase your knowledge of your field.
- Practice your talk with your lab members or others in the department.
- Keep a timer next to you while presenting so you have an idea if you are going too quickly or slowly.
- Video-record yourself giving your talk, and then playback to see how you do. It may be a bit uncomfortable watching yourself, but ultimately you will be able to see the things you do wrong or don't like, and if you are aware of them, you will be able to fix them.
- At conferences like ESA, there will be a moderator who will introduce you, then time your talk. They may hold up a sign or otherwise catch your attention to indicate how much time you have left (i.e., holding up a "3 minutes left" sign, etc.). They will stop you if you run over time.
- When you get up to the podium to give your talk, take a moment to adjust the microphone and make sure your audience can hear you.
- Look at the audience when you speak, not your slides.
- Speak slowly and clearly.
- Avoid speaking with an upward inflection (i.e. when your voice goes up at the end of a sentence). This makes it sound as if you are asking a question instead of making a statement ("These are the results." versus "These are the results?") This can make you sound less confident about your work, and if you don't sound confident, people are less likely to take you or your work seriously. When you practice speaking, make sure that your voice does not go up at the end of each sentence.
- Laser pointers are useful tools when used the right way. DO use one to point out important parts of pictures or complex diagrams. Otherwise, DO NOT use one unless you really need it-- it can be very distracting to your audience. DO NOT point to features that your audience can clearly see for themselves, like figure labels or text. If something is unclear, it's usually better to redesign the slide or figure, or even use arrows or an animation to illustrate your point. Also, NEVER point a laser at cameras or members of the audience.
- Be aware that while you are talking, people might take pictures of your slides. If you do not want this, then you can start your talk by saying "no photography please" or put this message on a slide at the beginning of your talk.
- After you give your talk, don't leave the room immediately after. Wait until the end of the session, or at least until the next break because you might be approached by other students and professors who are interested in your work and have questions or want to collaborate. You may even be offered a job or postdoc position!

## Designing Slides for Presentations: Tips and Tricks

- Be aware of colorblindness-- don't use red on green or red on blue. If you are colorblind, it may be useful to have someone who is not colorblind check your slides.
- Don't fill your slides with text. Large blocks of text are boring-- use pictures instead! You want your slides to be visually appealing.
- Make sure all text is spelled right.
- If you are using video or animations, be prepared in case they don't work. Unless you really need it, it might be better to leave it out.
- If your slide contains information or graphics from a paper, put a citation in the lower right-hand corner of the slide.
- If you use pictures that you didn't take, be aware of copyrights. Don't steal pictures!
  - There are repositories of free images you can use:
    - <https://unsplash.com/>
    - <https://phil.cdc.gov/phil/home.asp>
    - You can also search for pictures without copyright restrictions on Google or on Flickr by adjusting the search settings.

## Tips for Poster Design

- Minimize the text on your poster-- use visuals and graphics instead.
- Make sure your text is legible.
- You can print postcard sized versions of your poster and put them in a pocket underneath your poster so that people who are interested can take a copy with them.

## Networking

**This is not optional-- you must know how to network.** As a scientist, this can help you make collaborations that can advance your research, whether you are looking for an undergraduate assistant, help with learning or troubleshooting a protocol, or something else. As a student, this is a great way to find out about student awards and funding sources, labs that are looking for graduate students, and more. As an early career professional, networking will be your most important tool for finding postdocs, jobs, and other opportunities. Through networking, you will be able to find out about positions that haven't been advertised or will be opening up in the near future, and by making a personal connection with the people who know about them or the hiring process, you will have an advantage over other candidates.

Here are some tips:

- Talk to everyone! You never know who might have a connection or who might be able to help you.
- Always be polite. Don't insult people or speak poorly of others behind their backs-- word gets around and this can come back to cause problems for you later.
- The more you practice, the better you will get. You can start by challenging yourself to talk to at least one person you don't know during a coffee break.
- Networking isn't just for conferences. Go to departmental seminars and have breakfast/lunch with seminar speakers. They remember you!
- Network with alumni! Universities, departments, Greek societies and other student organizations maintain lists of alumni you can contact and network with.
  - Find out about the Penn State Department of Entomology Alumni here: <http://ento.psu.edu/alumni>
  - Penn State LionLink is open to all Penn State students and alumni: <https://directory.alumni.psu.edu/s/1218/16/interior.aspx?sid=1218&gid=4&pgid=3340>
  - Don't forget any other schools, universities or organizations you were involved with before you came to Penn State!
- It is good practice to send thank you notes to those who help you. Keep a pack of cards and stamps in your desk so you don't have an excuse not to write one. At the very least, send a thank you email.
- Networking isn't just about you. As you make connections and speak to different people, you will invariably find others who are looking for help. **Pay it forward and help others by telling them what you know or by introducing them to people you think they should talk to.** Not only is this the right thing to do, but people will also be more inclined to help you in return.

For more about networking, a good resource is *Networking for Nerds: Find, Access and Land Hidden Game-Changing Career Opportunities Everywhere*, by Alaina G. Levine.

## Business Cards

Business cards are great for networking and establishing connections. If you're presenting at a conference, you can also add stickers or write in the time and room of your presentation on your cards too.

You can have business cards printed at Penn State, but these don't give you as many options with design as other service. If a Penn State budget is paying for the business cards then you must use Penn State printing.

Some other resources for printing business cards are:

- Vista print-- very cheap
- Moo.com -- not as cheap, but there are more design options
- Another cheap option is to print your own cards with perforated sheets. You can buy these at Staples, Walmart, or online.

## **Maintaining an Online Presence**

It is highly recommended to create accounts on these websites:

- ResearchGate
  - This is similar to LinkedIn as it creates a network of followers and tracks your presentations, manuscripts, and other contributions. It also creates a score based on your contributions and activity on the website.
- Google and Google Scholar
  - Anything you publish will end up on Google Scholar at one point or another. If you have a Gmail account, you can create and edit a profile on Google Scholar, which makes it easier to find all of your publications and contact information.
- Orcid ID
  - An Orcid ID is free and gives you a unique digital identification number you can add to your publications, grants and more to distinguish your work from others. It's especially useful if there are other researchers who share your name. Find out more at <https://orcid.org/>.
- LinkedIn
  - This website is instrumental for building a network for your job search, especially if you are looking for jobs outside of academia. Make sure you fill out your profile and have a professional photo of yourself.
- Skype
  - Many researchers use Skype to contact each other, especially important for international collaborators.

Many researchers also have public accounts on the following social media platforms. If a lot of important researchers in your field use them, then you should consider making an account to keep up with important news in your field. (If you have a personal account on these platforms already, you may want to create separate personal

and professional accounts, and make sure the personal one is private from the public eye.)

- Twitter
- Facebook
- Instagram

You can also create your own personal website. Penn State offers free WordPress sites for students here: <https://sites.psu.edu/>

### **Media Attention and Talking to the Press**

It can be thrilling to be contacted by members of the press who are interested in talking to you or writing about your research. There are many potential benefits of doing this: speaking to the press is a form of public outreach that can help spread awareness of a particular problem and combat misinformation. Positive press attention is also great for your research and your reputation, and can be highlighted in resumes, cover letters, and even grant applications. It's also gratifying to know that others care about the type of work you are doing.

Many scientists are hesitant to speak with the press because they are afraid their work will be misinterpreted and contribute to the spread of misinformation. If you are uncomfortable speaking to the press, you can always say no. However, with proper preparation and work ahead of time, you can minimize the risk of being misinterpreted, and even help to combat misinformation and change negative opinions about your area of research.

First, discuss the opportunity with your advisor. They may have previous experience with the news source, and can offer specifics about your research they think you should emphasize. For example, when working with biological control, care needs to be taken that media outlets do not sensationalize the effects which currently may be unknown.

Next, do some background research on the media outlet that contacted you; what are their goals, and who are their audience? This can help you figure out what they are interested in and help you predict what kinds of questions they will ask you. You can also just ask the person who contacted you what kinds of questions they might ask, what kind of story/piece they are working on, and what they want to know.

Before doing an interview, decide what kind of message you want to deliver. Try to be positive and hopeful-- the news is full of hopeless stories to the point that people

stop listening because they feel there is nothing they can do about it. Don't contribute to pre-existing negativity; instead, show people that while there may be a problem, there are also solutions and scientists working hard to make a difference.

During the interview, aim to be as clear and concise as possible. Simplify but don't dumb down; people understand complex methods and ideas, but they lose interest in jargon, acronyms and excessive detail. Speak slowly and clearly.

If you are asked a question that you don't know the answer to, it's fine to say that you don't know or that there isn't enough known about the topic yet to form a conclusion. Do not say things that are not true or that you aren't sure of. Also, don't complain or say negative things about others. If there are questions you are not comfortable asking, then say so-- you can always decline to comment.

After being interviewed, keep an eye out for the final piece. If the message the journalist sends in their final piece is not the one you wanted to send, it can be very frustrating. Use it as a learning opportunity and be aware of these incorrect assumptions so you can work to combat them next time. Otherwise, don't linger on it-- it happens, and news comes and goes in the blink of an eye. The media keeps looking to the future, and so should you-- this is the only way to make progress and fix past mistakes.

However, if the journalist gets something completely wrong or misquotes you, do contact the journalist or media outlet and correct them.

## **Travel**

Penn State's CONCUR service is used to book airfare and process employee reimbursement. While traveling, save all of your receipts! To get reimbursement for travel, you need to fill out a CONUS form for domestic travel or an OCONUS form for international travel, then turn it into Lesley Heller-Guenther in the Department of Entomology Office. You can contact the office for the most up-to-date forms.

You can find out more about travel and reimbursement here: <http://ers.psu.edu/>

## **Concur/Employee Reimbursement System (ERS) Guide**

Penn State's Employee Reimbursement System, otherwise known as ERS, is located at [www.ers.psu.edu](http://www.ers.psu.edu). In ERS you can book flights, rental vehicles and lodging. If you are a Purchasing Card Holder your card can be directly linked to your profile for more convenient booking. In the Entomology Department, Lesley Heller-Guenther primarily

processes reports in this system. In order for her to process reports you must first log into the ERS System and make her an Expense Delegate. There are four types of reports that are filed in ERS: CONUS Employee Travel Reimbursements, OCONUS Employee Travel Reimbursements, Group Meal Expenses and Non-Employee Travel Reimbursements.

### CONUS Employee Travel

These are your In-Country Employee Travel Reports. In any travel report we require that you indicate mode of transportation, lodging (if overnight) and meals. You must indicate what *Budget* and *Fund* is to be charged as well as offer a *detailed description of travel* and fill in *itinerary* information. Current Personal Vehicle Mileage Rate is 53.5 cents per mile.

### OCONUS Employee Travel

These are your Outside of the United States Travel Reports. You are required to obtain approval through the Travel Safety Network (TSN) network *prior* to travel: <https://tsn.psu.edu> . When filing your report, we require that you provide the TSN Approval Documentation. You must indicate what *Budget* and *Fund* is to be charged as well as offer a *detailed description of travel* and fill in *itinerary* information.

### Group Meal

Group Meals in ERS should be processed within 60 days of the transaction date. Budget and Fund must be on form as well as signatures of the Purchaser and Budget Administrator. An itemized receipt (what was purchased) and credit card receipt must both be signed by the purchaser and supplied in addition to the Group Meal Form. One day trips where meals are being claimed require a One Day Travel- Meal Reimbursement Report.

### Airfare

Airfare being charged to Federal Funds must be booked through the Concur System. If you can find less expensive flights outside of Penn State's System you are required to supply a flight comparison from Concur showing that the flight you found was less expensive.

## Purchasing Card Charges in ERS

Purchasing Card Charges processed through ERS must be reconciled within 60 days: airfare, hotel, restaurant, rental car, etc. Any PCard Charges relating to your trip are to be reconciled once your trip is concluded.

## How to Assign Delegates in ERS/Concur

Delegates can be assigned to create expense reports in ERS for employees. You must do this so that the administration staff in the department of entomology can help you file expense reports related to traveling. The traveler (employee) should designate their own delegates using the following steps:

- Go to [www.ers.psu.edu](http://www.ers.psu.edu) and login (select "Login", top of the page in the yellow bar)
- Select "Profile", then "Profile settings"
- In the drop-down list on the left, under "Expense Setting", select "Expense Delegates"
- Click on the "Add Delegate" button and type in the search field. As you type information in the field, names will pop up. Select the name you would like to be your delegate and it will appear in the window.
- You should add: Lesley Heller-Guenther and Erika Stover.
- Click in the "Can Prepare" box ("Can View" will automatically fill in). You can also choose for this delegate to receive copies of the emails you receive from ERS.
- Select "Save" before you exit the window to finish the process.

Note: The employee (you) must add in the delegates. Someone who needs to act as a delegate is not able to initiate the process of becoming a delegate. Only after the delegation has been made by the employee can the delegate act on their behalf.

## Helpful Tips:

- A delegate only creates your reports; you are responsible for logging back into ERS and approving your expense reports. ERS will notify you when your delegate has completed the report and is ready for your review.
- When filing a travel report, we always want to know about your lodging, meals and mode of transportation.
- Fill out your Itinerary (located on the travel form) as often as you can. If your itinerary won't fit in the space provided please create an attachment.



- You will notice that there are expenses on the travel forms that don't require receipts. If you accumulate receipts for expenses while traveling submit them with your expense report, a little extra information never hurt anyone!
- Travel Reimbursements in ERS must be reconciled within 60 days of the return date, if reports aren't submitted Penn State reserves the right to not reimburse out of pocket expenses. If filing a travel exceeds 60 days you must write a memo explaining why.
- The Purchasing Card can be used to pay for lodging for guests of the University or employees. Employees may use the Purchasing Card for lodging if the cardholder has activated the travel option on their card, has passed the travel portion of the Purchasing Card quiz and has signed the cardholder agreement. Employees using the Purchasing Card to pay for lodging are under the same restrictions as apply to a standard purchase order. An itemized breakdown is necessary on all charges. The University will not accept charges for alcoholic beverages. Extra charges such as room service, telephone, in-room mini-bar, movies, valet, and porter must be paid at the time of service by the individual occupying the room.
- While conference registrations can be reimbursed or paid for using a P-card, personal memberships in professional organizations are not allowed.
  - In order for University funds to cover personal membership, you must write a memo and show proof of how it benefits the University (such as savings, or what registration costs would be with and without membership) for approval from Ag Admin.
  - Memberships cannot be purchased with the Penn State Purchasing Card; instead, you will need an SRFC (Special Request for Check). For more information, please read HR12; Professional Organization Memberships.

## Traveling Internationally

**As of July 1, 2016, all Penn State students, faculty, staff and other affiliated academics traveling to international destinations are required to record their travel with the Travel Safety Network. Approval is required in order to file your travel reimbursement; if that approval is not obtained, you won't receive a reimbursement for personal expenses accrued during travel and any Purchasing Card Expenses will be paid back to the University by the traveler.**

If you are traveling abroad for school-related reasons (research, attending a conference, etc.), you must take an Emergency preparedness workshop offered by the Penn State Travel Safety Network (TSN). The class is in-person and it is an hour long.

You will be provided information about travel insurance, important documents to bring and make copies of, exchanging money, etc.

Access the forms here: <https://tsn.psu.edu/>

The university automatically will provide you with traveler's insurance with blanket coverage. You do not have to pay anything extra for it. Coverage includes medical referrals, sickness and accident coverage, coordination of emergency medical evacuation and repatriation, as well as evacuation for political reasons or natural disasters.

Since insurance changes every year, you will have to attend the class to learn what insurance you will be covered under and where to print out the insurance cards.

When traveling abroad, you should always bring the following documents with you:

- Passport
- Driver's license
- Visa and Green Card forms (for international students studying in the United States)
- Insurance card
- Airline tickets and reservations
- Student ID

It is a good idea to make color copies of these documents as back-ups in case they get stolen or lost while you are traveling.

Other important things to do before you leave:

- Know what the emergency number (i.e. what the equivalent of 911 is) in the country you are visiting
- Know where the nearest Embassy is. Get their address and phone number.
- Look up what languages are spoken in the country you are visiting. If you don't know the language, then look up how to say common words and phrases. Some suggestions are "please", "thank you", "yes", "no", "where is...?", etc.
- Take a look at the geography and weather. Will it be rainy? Hot? Freezing? Check and be sure to pack appropriate clothing.
  - Also, be aware of altitude-- if you are not used to higher altitudes, you should take it easy your first day and give yourself time to acclimate.
- Have money exchanged into the local currency of the country you are visiting. You can exchange money at most banks or at currency exchange stations set up in airports and other travel-heavy areas.

- If you have a credit card or debit card, call your card's company ahead of time and do two things:
  - First, tell them that you will be traveling internationally. This is important because if they are not aware that you are traveling, they may assume that your card was stolen and freeze your account.
  - Second, ask if your card is accepted in the country you are visiting and if there are additional fees (like conversion or foreign transaction fees) for using your card abroad.

### Safety

- The number one crime that travelers abroad experience is theft. Always keep track of your personal belongings and make sure your bags are closed. Avoid sketchy situations or strange people.
  - The way pick-pocketers work is by distraction. One person may talk to you or ask you to hold something while their accomplice steals from you unnoticed. Be aware of your surroundings.
- Be aware of your surroundings: print out maps, know your routes and have alternate routes. If you walk around looking like a tourist, you will make an easy target for pickpockets.
- Be careful where you discuss your personal plans and who you discuss them with. Don't tell people if you are staying alone because you don't know who else may be listening.
- Travel in groups with possible. Stay with your group, and make sure everyone in your group is accounted for.
- If you are threatened by an armed or dangerous person, it is best not to resist. Do not elevate the situation. Wait for the right moment, then get away as quickly as possible.
- Seek a safe haven if you are threatened. Go anywhere with security, such as hotels, stores, markets, churches, airports. Go where there are other people.

Basically, use common sense and don't put yourself in bad situations.

If there is a problem, you can always call the Penn State University Park Police at 1-814-863-1111.

Global Safety Office: 1-814-863-8788, [emergencyprep@psu.edu](mailto:emergencyprep@psu.edu), [global.psu.edu/emergencyprep](http://global.psu.edu/emergencyprep)

Traveling abroad resources from Penn State: <http://controller.psu.edu/risk-management/traveling-abroad-resources-faculty-and-staff>

American citizens can also enroll in the Smart Traveler Enrollment Program (STEP). This is a service that will send you information and updates about what is happening in the country you are visiting.

## **Candidacy**

The candidacy exam is required for all doctoral students. You should aim to take your candidacy in your 3rd semester.

The test has both an oral component and a written component. You will be asked to critique a paper and then give an oral presentation of your critique.

The candidacy committee consists of three faculty members and two student members. At your candidacy, there will be all three faculty members, your advisor, and one or both of the student representatives.

A general overview of the test and information about the content can be found on the departmental website here:

<http://ento.psu.edu/graduateprograms/handbook/degree-information/degree-requirements/phd/examination-content-and-requirements>

## **Overview**

First, you must email Erika Stover and let her know that you want to take the candidacy and work out the dates for the test.

About 3 weeks before the test, you will receive an email from the candidacy committee that outlines the test and gives you due dates for each component of the test. You will have one week to send the candidacy committee three peer-reviewed articles from the scientific literature for you to critique. You should pick these papers with your advisor's approval and input. When selecting papers, keep in mind what you could say or critique about each paper. Don't just pick 3 papers haphazardly-- this will not go well for you.

Tips for selecting your paper:

- You must pick a paper that is peer reviewed.
- You cannot pick a paper that is a commentary or opinion piece, and you are not allowed to pick a review paper.

- Pick a paper that is relevant to your field.
- Don't just pick a paper because it is really bad. It's better to pick a paper from a high-quality journal and explore its limits.

After you send the 3 papers to the candidacy committee, they will take a few days to go through them and select one paper for you to criticize. You will then have a week to write a critique of the paper.

Tips for the critique:

- Remember that a critique is not just a summary of everything bad about the paper. You want to point out what the authors do well, along with what the authors could have improved on.
- Is the writing good? Is the writing grammatically correct or full of errors? Do the authors use too much jargon or is their writing clear?
- You can go through each section and explore if it is well written and cohesive-- do the parts relate to each other? Does the abstract give a good overview of what is in the paper? Does the introduction give adequate background? Are the methods vague or well explained? Do their conclusions and interpretation of the results make sense?
- Do the authors cite appropriate sources? Do the sources they cite actually include the information they cite the study for? Did the authors misinterpret the studies they cited? Were there sources the authors should have cited but didn't?
- Are there any glaring problems in the experimental design? Could they have set up their experiment in a better way?
- Were their methods and statistics appropriate?
- How are the stats? Do the stats make sense? Could they have used different stats? Do they use stats to manipulate their data in any way?
- What could the authors have done better? Is there a better method they could/should have used instead?
- What could the authors do to expand or continue their study? What should the authors look at next?
- How does the paper fit in with other studies in the field? What makes their paper stand out? What makes it important? Has their experiment been done before?
- How do the authors' findings change things in their field?
- Were there other ways that the authors could have interpreted their results?

In your critique, make sure you support your arguments and cite relevant papers.

After that, you will have one week to prepare a presentation of your critique. (You will not receive comments on your written critique before your oral presentation.) At your oral examination, you will go through the presentation and also be asked questions by the candidacy committee. They will test the scope of your knowledge as well as your critical thinking skills, and see that you are fit to continue in your doctoral studies. They may recommend that you take more classes in a specific area if they feel that your knowledge or experience is lacking.

You will be asked questions to:

- Test your critical thinking skills
- Test your general knowledge of entomology
- Test your knowledge of your specialized field
- Test your ability to design an experiment and use the scientific method
- See if you are fit to continue in the doctoral program, or if you need to take more classes and build up your knowledge

### **The Next Step after Candidacy: Forming Your Committee**

After you pass your candidacy, celebrate! You did it!

Then, you should focus on finding committee members who will be able to help you and give you good input on your projects. **You are required to have at least two committee members from the Department of Entomology and at least one from another department. You must have a minimum of 4 faculty members with graduate faculty status on your committee**

Ask your advisor who she/he thinks you should put on your committee, and let him/her know who you were thinking of asking. He/she can tell you who would be good and who might not be good to ask. You want to make sure you have members who get along well and don't hate each other (it will make your life easier in the long run). Additionally, consider how they can be a resource to you when choosing. If you need expertise in a certain area that your advisor lacks, find a member to fill that knowledge gap.

**Ideally, you are supposed to get your committee together within 30 days of passing your candidacy.** You should also focus on finishing up all of your required courses. Ideally, you should have this done before you take your comprehensives.

## **Comprehensives (aka “comps”)**

You should aim to take your comps in the 5th semester.

If anyone in your lab has done their comps already, or if your advisor/committee members have any other students who have done comps before, ask if you can see their proposals. Also talk to other students outside your lab. Talk to people!

You are required to give your proposal to your committee at least 2 weeks prior to your comprehensive exam. You are also required to let Erika Stover know 2 weeks before the exam to schedule your exam. She needs to process paperwork and get it back from the Graduate School so it can be official.

Around 2-3 months before you take your comprehensive exam, have an individual meeting with each of your committee members and ask them:

1. What do you expect to see in the written proposal? What format should I follow for the written proposal?
2. What types of questions should I expect to be asked during my comprehensive exam?
3. What should I study to prepare for my comprehensive exam? How should I prepare for my comprehensive exam?

### **A few guidelines for the written proposal:**

A comprehensive proposal should have an introduction that gives an overview of all of the chapters of your dissertation and explains how they connect (about a page), and then one or two pages for each chapter describing what the project is and what work you have done already. (Each chapter of your dissertation will usually be a separate publication.) You can also put in a timeline/schedule of when you plan to have things done and a transcript showing that you have fulfilled the department requirements.

Typically, the finished proposal ends up being around 20 pages, but it can be shorter or longer. If you have figures or a manuscript finished for one of the chapters, you can put those in.

### **What your committee members will ask:**

- The purpose of the comprehensive test is to show that you have a comprehensive understanding of everything in your field. You don't need to know

everything in detail, but you should at least be aware of important people and experiments, and demonstrate that you have an intellectual curiosity in what you are studying.

- You should make a presentation, but understand that you might not get through all of the slides. Each slide will act as a springboard for questions, and your committee members will all build off of each other's questions
- Your committee members will ask questions to see if you understand the concepts behind what you wrote in your proposal, as well as if you understand the methods.
- Your committee members may also test your skills as a scientist by asking you to design a hypothetical experiment or asking you how you would test something.

### **General Comprehensive Exam Study Guide**

- Notes from the classes you have taken relevant to both your field and the field of entomology, especially ENT 432!
- Important terms in your field
- Important lab groups in your field and what they are working on
- Important people working in your field today
- Historical questions on both your field and the field of Entomology
- Early days of research in your field
- Important figures and people in the group?
- Important experiments
- Evolution and phylogeny of the insects you study
- Important species? Where are they native? What is their life history?
- Phylogeny and evolution of your group?
- Debates that have dominated your field
- Know your methodologies inside and out
  - Limitations of each method
  - Assumptions of each method
- Other questions you may be asked:
  - What kind of career are you interested in? Where do you see yourself in five years?
  - What research do other people in our department work on?

### **After Comps:**

If you pass your comps, then congratulations! You have passed the last major milestone before your dissertation. Your main focus now should be research and writing your dissertation chapters.



If you do not pass your comps, your committee will work with you to identify the areas that you need improvement in and decide if there are any classes that you should take. When you are ready and your committee approves, you can reschedule and take your comprehensives again.

Some people go through a “post-comps slump” where they lose motivation and feel burned out in the weeks following their comps. This is completely normal. Don’t feel guilty about not being as productive during this time-- give yourself some time to recover from your comps before you launch yourself into your next big project.

Once you pass your comprehensives, you should be completely done with your required courses. After your comps, you will sign up for dissertation credits. Each semester, you are allowed to take 1 3-credit course as credit or you can audit the class by registering for 601, which has reduced tuition cost.

## **The Defense**

The defense is the last step of your program and consists of a public presentation of your research, followed by an oral examination with your committee members. At your defense, you get to show what research you have been doing during your time at Penn State, along with the relevance of your work and how all the chapters of your dissertation connect.

As with your candidacy and comprehensives, you need to show that you have a solid and comprehensive understanding of your work as well as your field. Reminding yourself of important concepts and vocabulary is important, as well as reminding yourself of the reasons behind your methodology. You probably won’t have time to talk about everything in your written dissertation and this is fine; having a cohesive research story is more important than cramming in every detail. Be sure to leave a little time at the end for questions.

The silver-lining of the defense is that you have already done 90% of the hard work; now you only need to demonstrate your knowledge and understanding.

Here are some helpful resources:

- Here are the graduate school templates for your dissertation. Choose whichever one suits your operating system. <http://www.sas.psu.edu/penn-state-thesis-template/>
- This page has resources about deadline and dissertation pitfalls: <http://gradschool.psu.edu/current-students/etd/>

## **Part 3: Life After Penn State: Preparing for What Comes Next**

### **Master's students: Continuing onto a PhD**

Some generally good advice is not to do a PhD if you are unsure about it. If you have no idea what kind of career you want and whether you need a PhD to do it, it might be a good idea to take a year or two off and explore other options to see if research is something you want to do.

If you've decided that you want to continue onto a PhD, you should start thinking about what kinds of research you are interested in and then look for programs with faculty members who do the kind of research you want to do. Often you will not be admitted to a PhD program unless you have already identified a faculty member who is willing to serve as your advisor.

To find potential advisors, start your search online. Many faculty have their own lab websites independent of departmental websites. You can also meet faculty at conferences: go to their talks or invite them to see yours! Ask faculty members about their research and see if they have positions open in their lab. Start contacting and building relationships with potential advisors as far ahead of time as you can, and keep following up with them.

When selecting an advisor, you want to make sure that your research interests align. Also keep in mind that you want to pick someone who will help you in your professional development. Ask others in the lab about their program and the lab environment, and see what they enjoy or what they don't. You will likely be there for 4 years or more, so don't take this decision lightly.

### **Contacting Professors Online**

The first rule is this: don't send the same email to everyone! When you copy and paste the same email and send it, you look more like a spammer than an actual interested student, and no one will want to read your email. You can use the same general framework for each email, but change it for each department and professor, and make sure you put the correct professor's name on each email!

Generally, your email should have 3 main components or sections:

- An introduction of who you are and what you are contacting the professor for (about a paragraph long)

- A concise summary of your research, and how it relates to what kind of work you want to do in the future (no more than 1 paragraph long)
- An explanation of why you want to work with that professor and why you would be a good fit for their lab (1-2 paragraphs)

You should attach a copy of your CV to your email. If you are comfortable with your GPA and grades, you can also attach an unofficial copy of your transcript. Here are some example emails to help you:

### **Example #1**

Dear Professor XXXXXXXXXX,

My name is XXXXXXXXXX, and I am interested in applying to the entomology program at Penn State University for this coming fall. Last spring, I graduated from the University of XXXXXXXXXX, with a B.S. in Biology with a concentration in Ecology. My GPA upon graduation was XXX, and I have spent the past fall working on furthering my undergraduate honors thesis at the XXXXXXXXXX Museum of Natural History under XXXXXXXXXX.

I am interested in population dynamics and ecology of insects, especially that of invasive species and control factors. I have spent the last two and a half years working on my undergraduate honors thesis looking at the parasitic Hymenoptera community around the invasive winter moth in XXXXXXXXXX, and also spent last summer working in XXXXXXXXXX's lab with graduate student XXXXXXXXXX, working with the predatory community surrounding corn pest species. My career goal is to be a Forest Service Entomologist or Extension Entomologist.

After looking at the extension website and reading some of your literature, I think that working with you will be a good fit to both my previous experience and interest in invasive species and population ecology. Over the summer I read "XXXXXXX" as a preparation for a project I was going to help XXXXXXXXXX, with, and was interested to learn about the XXXXXXXXXX, as an invasive species in XXXXXXXXXX, and how it is being dealt with as this would provide a basis for a potential project with the extension, and further to apply this to other invasives I will work with in my career.

I was curious if you were taking on a graduate student for next fall, and if so, if you would like to meet with me. I can meet any date after XXXXXXXXXX, as I live near campus and will be starting a job in XXXXXXXXXX's lab. I have attached my Curriculum Vitae.

Sincerely,  
XXXXXXXXXX

## Example #2

Hello Professor XXXXXXXXXXXX,

I am a Master's student at XXXXXXXXXXXX University in XXXXXXXXXXXX. I am currently looking to pursue a PhD in Entomology. and would be interested in attending Penn State. Are you taking in any new graduate students for Fall 2014? I have attached a copy of my C.V. and my unofficial transcript below.

My current research deals with the ecology of salt marshes in the XXXXXXXXXXXX marshlands. For the past few years I have been doing a taxonomic study, collecting samples in the field and identifying all insects to the family level to determine the arthropod community composition and food web structure. My research is part of a larger project looking at the passage of heavy metal pollutants through marshland food web systems, and the possible use of XXXXXXXXXXXX as an indicator species. As part of my sampling efforts, I designed and built floating pitfall traps to capture arthropods on the water's surface. I am currently working to publish my research.

Through my research, I have gained an appreciation for insect diversity and taxonomic work. I was also fortunate enough to go behind-the-scenes at the XXXXXXXXXXXX Museum of Natural History and see their insect collections on an off-campus field trip. It was fascinating to see the decades of work that had accumulated- there was one entire room just devoted to gall wasps donated by a single enthusiast. From that trip, I learned that so much work goes into such a collection, but also that so much more work needs to be done- there were many donated specimens that needed to be cleaned up and catalogued. The curator pulled out a folded-up newspaper for us that was full of hundreds of dried-up beetles. They were still being kept in the newspaper they had been donated in simply because no one had the time to take care of them properly.

I have kept up with your blogs on your lab website and on the XXXXXXXXXXXX, website over the last few months, and always find your entries interesting (one of my favorites was the poem on insect genera). I know that you have had opportunities for graduate students in the past, and I would like to ask if there are currently any opportunities for graduate students in your lab or at the XXXXXXXXXXXX.

Thank you for your time!

Sincerely,  
XXXXXXXXXX

## **Where to Pursue Your Degrees**

Some people stay at the same university for their undergraduate and Master's work, or their Master's and PhD work. Some do their undergraduate, Master's and PhD work at all different universities. Some people skip the Master's entirely and go straight from undergrad to PhD, either at the same university or a different one. There is nothing wrong with any of these options.

However, it is generally not recommended to do your undergraduate, Master's and PhD degrees all at the same university. Doing this can make you look sheltered and inexperienced. It is better to expand your horizons and get a broader view of the field by doing your degrees at different universities. Go explore your field!

## **Applying to Programs**

Many PhD programs require the GRE (Graduate Record Examination; find out more at <http://www.ets.org/gre>). You likely took this already if you're coming from a Master's program, but you may want to retake it if your scores were low. If GRE information is not available on the website of the program you are looking into, then you can contact the department office, students in the program or your potential advisors about what GRE scores you should aim for.

GRE scores are not the only thing that admissions committees look at; having that contact with a potential advisor before you apply is very important, and factors such as GPA, research experience and publications, as well as internship and work experience will all count in the decision. A low GRE score or low GPA will not necessarily derail your academic career.

International students may also have to take the TOEFL (Test of English as a Foreign Language; find out more at [www.ets.org/toefl](http://www.ets.org/toefl)).

You will also need letters of recommendation (see section below) and a statement of purpose. A good statement of purpose will showcase why you are a good addition to the program you are applying for. Your statement should show your passion for science and research, and discuss how you are qualified (research experience, paper publications, conference presentations, leadership experience, programs you have created, people you have trained, etc.). You should also discuss who you are

interested in working with in the program (i.e. your potential advisor) and what kind of research you want to do.

### **PhD Students: Transitioning to a Postdoc**

A postdoc is typically thought of as training for those continuing onto an academic career and becoming a professor. However, a postdoc is not just for academic careers; if you're interested in doing any kind of research, a postdoc can be a great way to develop your own projects and demonstrate independence in research. If you are looking to get experience in a different research area or transition into a different career (i.e. industry, science policy, etc.) a postdoc could be a valuable opportunity to help you get the skills and training you need to transition to the career you want.

Don't just do a postdoc because you don't know what else to do. You really need to sit down and decide where you see yourself in five years and what you want to be doing. A postdoc position is a big time investment (1-2 years or longer) that might be better spent starting your career instead of delaying it. Figure out if you need postdoctoral experience for the career you want to pursue, and be sure to use your postdoc time to get additional training towards that career. A postdoc is a stepping stone, not a final destination.

Finally, don't feel pressured to work as a postdoc just because your professors want you to. If a postdoc position wouldn't benefit you for the career you want to pursue, then don't delay your career unnecessarily. You are not a failure if you decide that you don't want to continue onto a postdoc or pursue an academic career.

### **Tips for Finding Postdocs**

If you want to do a postdoc, you should know what kind of research you want to do and what kind of career you are interested in. Remember that a postdoc is a means to an end, and not the end itself. Start your search for postdocs at least a year before graduating; this will give you ample time to explore different options, build a relationship with potential advisors and apply for grants and fellowships.

Universities are not the only places for postdocs; you can also find postdocs in government labs, museums, and private companies. If you are interested in working in industry, see if the companies you want to work with offer post-doctoral positions. This is a great way to get experience with the company, and if there are job openings, companies will usually hire from their pool of postdocs.

As with finding a Master's or PhD program, you should research programs and departments online and see if their interests and goals match your own. Join listservs for professional organizations-- postdocs and other opportunities are often announced through emails here.

A great way to find postdocs or meet with potential advisors is at conferences. Attend their talks, and if you are presenting invite them to come and hear you talk about your research. Also, don't forget to talk to people in your department. You are surrounded by people who have experience and are willing to help!

### **Tips for Funding Your Postdoc**

You should start applying for funding from the end of your dissertation to your early postdoc years. Keep in mind that the process of applying for a fellowship can take 2-6 months. There are both research and non-research science fellowships, as well as training grants for industry, teaching, science policy and more. Funding opportunities are offered by industries, universities, professional organizations, foundations and more.

Here are some resources for finding postdocs, fellowships, and internships and funding:

- Science Careers page on the AAAS website (AAAS offers fellowships such as the AAAS S&T fellowship)
- National Postdoc Association curated list
- Universities such as UC Berkley, UPenn, UNC, and Duke have extensive lists of fellowships. Many universities also have an office of postdoctoral affairs that will help you find funding opportunities and prepare applications.
  - Penn State Office of Postdoctoral Affairs: <https://www.research.psu.edu/opa>
- National Science Foundation
- National Institutes for Health (NIH)
- Helen Hay Whitney Foundation supports postdocs in biomedical sciences: <http://hhwf.org/research-fellowship/>
- SciVal Funding: a database that is free for PSU students to access
- Profellow.com
- The Graduate Women in Science (GWIS) National Fellowships Program: [http://www.gwis.org/?page=fellowship\\_program](http://www.gwis.org/?page=fellowship_program)
- Life Sciences Research Foundation (LSRF): <http://www.lsrp.org/home>
- There are international fellowships you can apply for too, such as:
  - Marie Sklodowska-Curie European Fellowship

- Humboldt Research Fellowship: [https://www.humboldt-foundation.de/web/pub\\_progsearch.main?p\\_lang=en&p\\_forschungsaufenthalt\\_id=1&p\\_promotions\\_jahr=2016&p\\_karrierestufe\\_id=1&p\\_nation=USA&p\\_button\\_search=Search&p\\_detail\\_text\\_id=771](https://www.humboldt-foundation.de/web/pub_progsearch.main?p_lang=en&p_forschungsaufenthalt_id=1&p_promotions_jahr=2016&p_karrierestufe_id=1&p_nation=USA&p_button_search=Search&p_detail_text_id=771)
- Japan Society for the Promotion of Science (JSPS) Fellowships for research in Japan: <https://www.jsps.go.jp/english/e-fellow/>
- Human Frontier Science Program (HFSP): <http://www.hfsp.org/>
- Company of Biologists journals each offer Travelling Fellowships: <http://www.biologists.com/travelling-fellowships/>
- EMBO Long-Term Fellowships: <http://www.embo.org/funding-awards/fellowships/long-term-fellowships>
- Industries: some companies will offer fellowships
- USA Jobs Pathways: offers internships or student level entry into government positions
- Ask around and look at professional societies, meetings, conferences, journals, universities, foundations, etc. Network!

When applying for grants, you will need a strong CV. One factor that matters is how many publications you have; the more, the better. Something else that matters but isn't often thought of is how successful and established your advisors and collaborators are. Funding committees want to make sure that the research in the proposal can actually be accomplished. If your postdoctoral advisor and collaborators have successfully secure grants and funding, established their own labs and have access to different facilities and resources, it will make it easier for you to get grants.

For more about postdocs and for more help, you can contact or visit the Penn State Office of Postdoctoral Affairs at <https://www.research.psu.edu/opa>

### **Tips for Finding Jobs**

Figure out what kinds of jobs you are interested in, and start looking at the job market to see what types of jobs are posted. Read job postings to see what kinds of skills and experience is necessary. You should try to do this at least a year before you start applying to jobs. It's better to start sooner because if you look at a job posting and see that there are skills or experience that you don't have, you will have more time to get those skills or experiences.

If there is a specific kind of job you are interested in, find out what keywords are associated with that job. One way to do this is to save job applications, combine them into one document file, then use it to generate a word cloud and see what words come



up the most. Then, use those words to search for jobs. Make sure those words are also in your application materials (CV, resume, cover letters, etc.), as well as on your LinkedIn and other online or social media profiles. This will make it easier for people to search for you to fill positions.

There are tons of websites for searching for jobs based on type of job and locations. You can sign up for alerts when jobs you are interested in are posted. There are many different search engines and job websites-- figure out what kind of career you are interested in, and see where those jobs are posted.

Some examples of job-finding websites are:

- USAJobs
- O\*Net Online at <https://www.onetonline.org/>
- NatureJobs at <https://www.nature.com/naturejobs/science/>
- HigherEdJobs at <https://www.higheredjobs.com/>
- Chronicle of Higher Education ChronicleVitae at [https://chroniclevitae.com/job\\_search/new?cid=UCHETOPNAV](https://chroniclevitae.com/job_search/new?cid=UCHETOPNAV)
- And more general ones like SimplyHired, Monster, Indeed.com, LinkedIn, Craigslist, etc.

If you are a member of any professional societies, you should check out their websites for career resources and job postings. For example, the Entomological Society of America posts jobs at <https://www.entsoc.org/listjobs>. You can also create an account and add your CV and information to the ESA resume database at <https://www.entsoc.org/listresumes>.

Check out what social media and websites people in your field tend to use. For example, many entomologists use Twitter or Facebook and may post jobs there. Make accounts on websites that people in your field tend to use so you can follow them and keep up-to-date.

## **Networking and Informational Interviews**

The majority of jobs are found through networking (check out the section above on networking for more information). However, even though the point of networking is to find jobs, you should NEVER ask someone for a job. This may seem counterintuitive, but asking someone for a job can make you appear desperate, and can make the person you ask feel awkward or uncomfortable. Instead, tell them that you are coming to the end of your program and will be on the job market soon, and ask them if they are aware of any opportunities in the field. This is a good way to let people know your

situation and give them an opportunity to help, without putting pressure on them to find you a job.

You can contact people who have the types of jobs you want and conduct informational interviews. Send them an email saying that you are interested in X kinds of jobs, and ask if they have any time to chat about their job. Most people will be happy to talk, whether it be in person, on the phone or through email. If they agree, then come up with a few questions to ask, such as:

- How did you start doing this kind of work?
- What do you like/dislike about your job?
- How do you see the future of the field?
- What can people who are interested in getting this kind of job do to prepare themselves?
- Are there any professional organizations or networking events I should join or attend?
- Is there someone I should talk to about careers in this field? Would you be willing to introduce me to them (in person or through email?)

Try not to overwhelm the person or ask too many questions the first time you speak with them. Be polite, thank them for taking the time to talk, and ask if you can contact them again if you have any more questions.

### **Tips for Using LinkedIn**

LinkedIn is like a professional Facebook for building your career. This is an essential tool, especially if you are looking for jobs outside of academia. There are many articles written on how to use your LinkedIn effectively, but below are a few basic tips:

- Write a profile summary. Think of this as the written version of your “elevator pitch”-- say who you are, what you do and what types of work or careers you are interested in.
- Make sure to add your education, experience, past employers and any other important details to your main profile page. Be specific-- try to include statistics or numbers of what you have done (for example, “saved farmers X amount of money by doing Y” or “hired and trained X number of student workers in Y”).
- Have a professional picture of yourself.
- See if there are groups for professional societies and join them. You can also join any alumni groups for your graduate and undergraduate institutions, as well as your high school. All professional groups have a job section where members post

if they are hiring or not. If you are looking for jobs in a specific area, you may want to join any groups for that area as well. Penn State has multiple Alumni chapters for different cities and regions--check them out!

- Find companies or institutions you are interested in working for and follow them. You will then see any updates or jobs on your Newsfeed.
- Be active-- keep your LinkedIn up-to-date. You can also post any accomplishments or updates of what you are doing on your Newsfeed, such as when you have a paper published or when you attend a professional conference.
- Check out LinkedIn's job-finding feature.
- LinkedIn also has a career advice feature where it will put you in touch with people in different fields who are willing to give you advice or talk with you about different careers.

### **Tips for Applying to Jobs**

Just because you don't have all of the experience or skills they are asking for in the job listing doesn't mean that you shouldn't apply. You should apply anyway; you never know specifically what the hiring officers are going to focus on. There is always time to learn things later, and they will train you on the job as well.

One way to stand out from other applicants is to contact employees within the company or department that you are applying to. Invite them to connect with you by sending a short email with a few sentences explaining that you are interested in a specific position and would like to know more about that position. Ask them if they have time to chat or Skype with you, and be ready with questions. Current employees can often give you insight about what you should include on your resume or CV, and they may even be able to tell you what kind of person they are looking to hire, or what the hiring managers like or don't like in an application.

### **Curriculum Vitae (CVs) and Resumes**

Depending on the type of job you are applying to, you will need either a curriculum vitae (CV) or a resume. CVs are commonly used in academia, whereas resumes are commonly used outside of it.

A CV is a list of everything you have ever done in your life as an academic. It usually has the following sections:

- Name and contact info at the top
- Education
- Publications

- Research Presentations
- Outreach Experience
- Honors and Awards
- Mentorship and Leadership Experience
- Grants
- Teaching Experience
- List of Relevant Courses

Whereas your CV is a list of everything you have ever done, a resume is meant to show that you have specific experience for a specific job. Resumes are usually only a page long, though there are exceptions (for example, when applying for a government position through USAjobs.com, resumes are usually longer and more detailed).

You should tailor your resume to each job you are applying for. Look through a job application, see what specific skills and experience they want from applicants, and then make sure you include those on your resume. Also figure out what keywords are important, and be sure to include those in your application materials. Don't just send the same resume to different people-- it looks lazy and unprofessional.

It helps to have a master file listing all of your experiences and skills. Then, when preparing your resume for a specific job, you can go through the master file and choose what is relevant.

It also helps to look at other people's CVs and resumes, especially if they hold a position similar to what you are applying for.

When sending your CV or resume, always be sure to send it as a pdf so that the formatting doesn't change if opened in other programs or on other systems.

### **Letters of Recommendation**

Pick people who will make you look good-- they should have a good reputation and be able to speak about your strengths and what makes you good for the program/position you are applying for. Give your letter writers at least two weeks ahead of time to prepare their letters of recommendation (longer is better). Send reminders so they do not forget.

The way to get a good recommendation letter is to make it easy for your letter writers. Tell them what they need to include in the letter, send them your C.V. and make notes of specific events, accomplishments or qualities you want them to mention.

## Cover Letters

When applying for a job, you should always write a cover letter. Let's repeat that. **When applying for a job, you should always write a cover letter.**

A good cover letter will show your passion and convince the hiring manager why you are a good fit for the position. Don't use the same cover letter for multiple jobs-- each cover letter should be tailored to each specific company and its needs. Look through the job listing carefully to figure out what skills or experiences they are looking for in a candidate, then write about how you have these skills and experiences. If you don't have the exact skills or experiences requested, then write about the ones you do have. Emphasize how these other skills and experiences relate to the job you're applying for, and how they make you a qualified and competitive candidate.

Numbers and statistics showing your productivity and accomplishments are great on resumes and in cover letters. Here are some examples:

- "Hired and trained six undergraduates in scientific research"
- "Presented research at a national conference in front of X number of people"
- "Saved X amount of money by doing \_\_\_\_\_"
- "Managed a project that saved farmers X amount of money"
- "Reduced crop loss by X percent" or "Increased yields by X percent"

Don't list everything that you've ever done; that's what your CV or resume is for. Instead, use the cover letter as a chance to highlight some important things you've done that relate to the job you are applying for. Your cover letter is meant to complement your CV and/or resume.

Something else important to keep in mind is how you stand out from other candidates applying for the position. What makes you unique? What do you have that other candidates don't? How can this help the organization/company you are applying to? How could your unique skills help you do your job better, and accomplish things that no other candidate is capable of? Know what differences set you apart from the rest of the applicants, and use them to your advantage to convince the hiring managers that you are the ideal person for the job.

## Hearing Back

If they are interested in your application, they will invite you for an interview. The interview may be in person, over the phone, or through a video-chat online service such as Skype or Zoom.

If they are not interested in you, you will usually get an email or phone call saying so. If you want, you can contact them and ask for feedback on what you could do to improve your application next time. Some will give you feedback, but others may not. Some have a policy against giving feedback because of liability concerns.

What if you don't hear back? It is usually polite to wait three weeks after the deadline, then send a follow-up email or phone call. Some companies may not contact applicants unless they are interested in interviewing them. Check the original job application to

## Preparing for Interviews

Prepare ahead of time and do some background research on the position you are applying to and the employer (organization, university, business, etc.). If you know who you are interviewing with, do background research on them and try to anticipate what kind of candidate they are looking for and what kinds of questions they will ask.

At the beginning of your interview, you will usually be asked to give a brief (1-5 minute) introduction. Along with introducing yourself, you can include why you are interested in the position, and why you are a good fit for the position and the employer. Basically, you want to answer the question: "why should we hire you?"

Your interviewers will then ask you a series of questions to evaluate whether you are good for the job or not. Look up potential interview questions online and prepare for how you will answer them. You can look up the most popular interview questions asked by interviewers at the places you are applying to at websites like Glassdoor and Quora.

### **Some examples of questions you may be asked during interviews:**

- How do you see yourself fitting in with the company/lab/organization/etc.?
- What are your interests? What do you like the most about your current job? The least?
- I saw on your resume/CV that you did \_\_\_\_\_. Can you tell us more about that?

- What's an example of \_\_\_\_\_ situation/problem you have worked on in the past?
- How would you handle \_\_\_\_\_ situation/problem?

**It is illegal for your interviewers to ask you questions about your:**

- Age
- Race or ethnicity
- Country of national origin or birth place
- Gender or Sexual orientation
- Religion
- Medical history, medical conditions or disabilities
- Marital status, family status or pregnancy

If you do get questions related to any of the topics above, you can choose whether or not to answer.

If you don't want to answer, you can say "I do not think that you are legally permitted to ask me that question, and I do not feel comfortable answering it" or just "I am not comfortable answering that question"

If you want to answer and have no problem with them knowing whatever details you want to provide, then by all means answer. It's your decision, but understand that if you give them that information, it may affect their decision whether to hire you or not.

**Note:** Although it is illegal for your interviewers to ask you about the topics above, it is not illegal for you to talk about them. Something important to note is that as soon as you offer up any information regarding the topics above, you have given them permission to ask you follow-up questions about it (for example, if you mention that you have kids, they are allowed to ask you how many, how old they are, etc.) Best advice: if you don't want to be asked about something, don't mention it.

### **The Huck Assessment**

The Huck Assessment is a practice behavioral interview that will tell you your strengths and weaknesses when it comes to interviewing. It is open and free for all graduate students. You can read more about the Huck Assessment at <https://wiki.vpr.psu.edu/display/HGSA/Graduate+Student+Assessment+System>. To sign up for the assessment, email [huckassessment@psu.edu](mailto:huckassessment@psu.edu)

## Job talks

Your job talk should be tailored to the job that you are applying for, and the amount of time you spend discussing a component of the job should be equal to the amount of time you would be doing that component of the job. For example, if the job is 25% research and 75% teaching, then make sure that only 25% of your talk is about research and the rest of the talk is focused on your teaching.

When applying for academic or research positions, you will often need to give a presentation on your research and how you will continue it if you get the job. You will then often have meetings with others (potential co-workers, faculty, current students, the deans, and even stakeholders). Remember that these are important components of your interview, and you will be evaluated and judged based on how you act and what you say after your talk as well as during your talk. Treat everyone with respect.

If you are interviewing for a teaching-intensive position, you need to have a well-thought-out statement on your teaching philosophy. You will likely need to give two talks, one on teaching and one on research, but the teaching talk is more important. If you need any supplies for your research, try to tie them into your classes. Any equipment you request should be used for both teaching and research. Be sure to highlight how you will get undergraduate students involved in research and science. Also, highlight how you will promote diversity in your students.

If you are applying for an extension position or a job that includes an extension component, then highlight concrete examples of how you have engaged with the public. If you have no experience here, then give examples of how you could engage with the public if you got the job. Do research on the types of organizations or programs available in the area, or otherwise take the initiative and create your own opportunities to engage with the public. Keep in mind that the core of extension is communication, and that there are many ways you can do this; publications can often be turned into fact sheets for the public, as well as blog posts and podcasts. You can also use social media platforms like Twitter to communicate with the public. Think about ending your talk with a 5-10 minute example of a presentation that you would give to the public, stakeholders, etc. This is a good demonstration of basic communication skills, especially if you don't have a lot of that on your CV.

As with other interviews, you should prepare ahead of time and do some background research on the program you are applying to. See what facilities are there and if there are opportunities for you to become involved in pre-existing organizations or start your own programs. If you know who you are interviewing with, do background



research on them. Try to figure out what they want in a candidate. Go to job talks held by the department to see how they are done, and practice your own job talk with your advisor or members of your lab group for feedback.

## **Salary Negotiation**

Research salaries ahead of time. You can use websites such as Glassdoor to see how much they typically offer for a given position. Salary negotiation doesn't just include salary, but also how many times you come up for promotion, healthcare, shares in company stock, vacation days, holidays and more. If they cannot match your salary expectations, you may be able to ask for more vacation days or a quicker review time before you come up for promotion instead. You should weigh the pros and cons of each, and negotiate on what matters to you.

Finally, make sure to get everything in writing!

## **When You Get a Job**

You should save a copy of your specific job description and duties. Having a list of what is expected of you as an employee is useful for negotiation in case your supervisors try to add more duties or change the roles of your job later on. It's also a useful reference when preparing for performance reviews/tenure, asking for a promotion, or looking for other jobs (your job description is basically a list of your qualifications).

## **Other Job Search Resources**

The Career Center at Penn State is a valuable resource in your job search. You can have up to ten free meetings with a career counselor every year. Before you can make an appointment, you will have to do a drop-in appointment.

Penn State also hosts Career Days during the fall and spring semesters where you can meet with employers. There are also many other job-related seminars across campus hosted by different professional societies-- join their listservs to hear about them!

Professional societies, both on and off campus, serve the sole purpose of helping you to develop professionally. Take advantage of conferences for networking and finding out about job opportunities or ways to improve your skills. For example, ESA has

a large archive of webinars related to careers: <http://www.entsoc.org/resources/esa-webinar-archives>.

Here are some other useful books:

- *A PhD Is Not Enough!: A Guide to Survival in Science*, by Peter J. Feibelman
- *Networking for Nerds: Find, Access and Land Hidden Game-Changing Career Opportunities Everywhere*, by Alaina G. Levine
- *Getting What You Came For: The Smart Student's Guide to Earning an M.A. or a Ph.D.*, by Robert Peters
- *Next Gen PhD: A Guide to Career Paths in Science*, by Melanie V. Sinche
- *The Professor Is In: The Essential Guide To Turning Your Ph.D. Into a Job*, by Karen Kelsky

### Leaving Penn State

- Contact Erika Stover about important deadlines and paperwork to fill out.
- The Graduate School website ([www.gradschool.psu.edu/index.cfm/current-students/etd](http://www.gradschool.psu.edu/index.cfm/current-students/etd)) has information on dissertation style guides and submission requirements, signatory pages, payment information, supporting materials and commencement.
- The Office of Theses and Dissertations has deadlines each semester for when you need to register by, etc. This list of deadlines will usually be emailed out at the beginning of each semester. **You must follow the deadlines that the Thesis Office; there are no exceptions. If you miss the deadlines, you will not graduate.**
  - Check out the website of the Graduate School here: <http://gradschool.psu.edu/current-students/etd/>
  - Or you can visit the Office of Theses and Dissertations at: 115 Kern Building, University Park, PA 16802. Phone: 1-814-865-5448
- Sign up for commencement
  - You don't have to walk but you can and should-- when else will you get the experience? Also, if you intend to become a professor in the future, you will probably want to wear your own doctoral robes when attending your students' graduations.
  - If you are planning to attend the commencement ceremony at University Park, you need to register on the commencement registration website at <https://secure.gradsch.psu.edu/cosign/registrations/commencement/>.
  - For questions about commencement (such as if you have graduated in a previous semester but want to attend a later commencement), you can email the Office of Theses and Dissertations at [gradthesis@psu.edu](mailto:gradthesis@psu.edu).
  - Academic Dress

- Academic regalia or the dress uniform of one of the U.S. Armed Forces is required in order to participate in graduation exercises. Advanced degree candidates wear the tassel of the cap on the left front edge. Doctoral candidates should carry their hoods over their left arms during the processional; master's candidates should wear the hoods over their shoulders (velvet toward chin).
- Caps and gowns may be ordered from the Penn State Bookstore. Rental cap and gown orders need to be placed six to eight weeks in advance to obtain proper hood color. If you need assistance, please contact the Penn State Bookstore at 1-814-863-0206.
- Please Note: Ornamentation representing honorary societies or nationalities is not approved attire for Penn State academic ceremonies. Thank you for your cooperation.
- Military Honor Cords: All graduating students who are military veterans, currently serving on active duty, in the reserve, or National Guard, or who will be granted a commission obtained through Penn State Reserve Officers Training Corps (ROTC) are eligible to receive a red, white and blue cord to wear with approved academic dress at commencement ceremonies. Those personnel who have already been granted priority registration status are automatically eligible for an honor cord and may visit or contact (814-863-0465) the Office of Veteran's Programs at 325 Boucke Building during normal business hours to receive it. ROTC personnel may pick up their honor cord from their ROTC representative/office. For those personnel who have not been granted priority registration, please visit the following website for instructions on required proof of service and where to submit the required documentation:  
<http://equity.psu.edu/veterans/priorreghonorcord>
- **Note from the Graduate School:** Degrees are officially conferred by the President during the commencement ceremony. In the case of doctoral candidates, diplomas are awarded on stage and candidates are hooded by their faculty advisors. In fairness to those students who have completed the requirements in accordance with the published deadlines, the Graduate School does not allow students who have not met those deadlines (including final submission of their theses/dissertations) or completed the degree requirements to participate in this prestigious and official ceremony. **It is extremely important that students are not misadvised regarding this practice.**

- Data
  - You must give all of the data you generated to your advisor. You can make copies to keep, but original copies (like lab notebooks, etc.) must stay with your advisor.
  - If you borrowed specimens from museums, you must return them.
  - Deposit all of your voucher specimens at the Frost Entomological Museum when you are done with them-- don't just leave them lying around where they can be damaged or lost. Contact Andy Deans for help: ([adeans@psu.edu](mailto:adeans@psu.edu)).
  - Students are encouraged to deposit works such as research papers, projects and presentations on ScholarSphere. ScholarSphere is a research repository service offered by the University Libraries and Information Technology Services that allows Penn State faculty, staff and students to share and manage their research with a worldwide audience. For more information, or if you have questions about ScholarSphere, please email [scholarsphere@psu.edu](mailto:scholarsphere@psu.edu). A member of the ScholarSphere service team will respond to your message.
- Make sure to return any and all library books you may have in your office/lab/home/car, your friend's office/lab/home/car, your advisor's office/lab/home/car, your undergraduate's office/lab/home/car and any other places that your library books may have ended up.
- Clear out your desk and workspaces. Return any borrowed equipment.
- Return your keys.

## Part 4: Living the Grad Student Life: Lifehacks for Grad School

### Dealing with Imposter Syndrome

“Imposter syndrome” is the term for the feeling that everyone made a mistake in judging you, that you are not actually a good student or researcher or person, and that you don’t actually deserve to be here. Everyone gets this feeling at one point or another. You are not alone.

If you feel this way, just remember this: if you are in the Entomology Department at Penn State, it means that you got into one of the best entomology programs in the United States. And **the reason** you got into one of the best entomology programs in the United States **is because you are good enough** to be in one of the best entomology programs in the United States.

It was not a mistake or an oversight. Don’t doubt yourself.

Here are some tips for dealing with imposter syndrome:

- Don’t blame yourself for things that are out of your control. Things go wrong in science all the time, whether a machine breaks or field conditions aren’t right. It is not your fault.
- Don’t try to live up to unrealistic expectations, whether they come from others or from yourself. Realize that you cannot do everything.
- Remember to take care of yourself. You are allowed to take breaks and do things that are not work.
- Take ownership of your successes. Understand that your project is **your** project, and your accomplishments are **yours**.
- Hang something in your work space that motivates you and makes you feel good about what you’re doing. Whether it’s a Post-it note, piece of artwork, or fun article, having a visual reminder that you’re awesome and your work is awesome can help keep you going when grad school gets tough.
- Keep a file of positive things and compliments. Anytime someone sends you a nice note or email complimenting you for a job well done or thanking you for your assistance or expertise, keep it! Collect these things in a folder or a file in your desk. Anytime you feel like you aren’t good enough, you now have a folder full of proof that you are meant to be where you are.

## Work-Life Balance, and What is Expected of Students in your Lab

Talk to your advisor so you are clear on what work is expected of you (i.e. how many hours a week you are expect to spend on classwork, teaching, research, etc.; how many hours must be spent in the lab versus outside of it; how much outreach you should do; and more). Your lab may have a statement that outlines what is expected of you as a student-- if not, then you can always draft one with your advisor.

Typically, students are expected to work at least 40 hours per week, with at least half of that time focused on research. However, you should be aware that a successful career in science usually requires more than that. For future postdoc and other professional positions, your suitability will be judged based on your passion for research, your creativity, but most importantly, your *productivity*.

## Time Management and Efficiency

In graduate school, you want to make sure that you do well in your classes and make progress on your research, as well as network and build up skills that can translate to a career. It's a lot to accomplish, so how do you stay focused and work efficiently?

Ultimately, different strategies work for different people. The only way to figure out what works for you is to keep trying new techniques. Be aware that you change over time-- maybe something that used to be helpful doesn't work anymore, or something that you used to hate is actually quite useful now. Be open to exploring and trying new things, and giving old ones a second chance.

Here are some strategies for time management and efficiency to get started:

- Get a planner and make a schedule for yourself. Block out chunks of time to devote to different tasks. Don't forget to schedule breaks as well!
- Set daily goals of what you want to accomplish each day. If you have a lot, then prioritize. Break down large tasks into smaller, more manageable chunks.
- Get a calendar (paper, whiteboard or online) to keep track of important dates and deadlines. Set reminders for yourself on your phone or email account.
- Set timers so you don't spend too much time on one thing and neglect something else.
- Only check your email or phone at set times during the day-- it's easy to waste time on these that could be better spent on other activities.

- Keep a daily journal or log. Take a few minutes at the end of each day to write down what you did that day. This can help keep you accountable for the work you are doing, and is also a good measure of the progress you are making.
  - You should also keep track of any major accomplishments, or examples of the following: reacting well in a crisis situation; finishing a project or a major milestone in a project; learning something new that makes you better at your job; adding new responsibilities, job titles, new people you oversee; winning awards, etc. These are the sorts of things you may want to include in cover letters or mention during interviews, so it's helpful to have examples written down for later reference.
- Identify times of day or accompanying habits that work best for you to get certain tasks done, so you can use them to your advantage.
  - Examples: Do you write best in the morning? Is microscope/lab work easier if you've had less coffee that day?...etc.
- Try the Pomodoro technique -- set a timer and work on a task for 25-30 minutes, then take a 5-10 minute break. This is a good way to get things done that you don't like.
- Treat grad school like a full-time job, making sure to come into the lab at a set time and work in the lab the same hours every day.
- Keep Post-it notes and pens in strategic locations so you can write down any fleeting thoughts or reminders before you forget them.

Find out what works for you, then do it!

## **Stress Management**

It's easy to get overwhelmed in grad school, but don't feel guilty about taking time for yourself to relax. You can't get quality work done if you aren't taking care of yourself.

Here are some tips for dealing with stress:

- Relaxing baths (bonus if it's candlelit!)
- Exercise
- Go to social events and Happy Hours
- Meet people outside of your lab
- Hobbies-- yes, you are allowed to have them and spend time on them

## **Verbal Incidents: Bullying behavior or sexual harassment at work**

This is never appropriate and it is never your fault.

Penn State has many resources for reporting sexual harassment and other forms of sexual misconduct\*\*:

- **To make a report to the University:**
  - Contact the University's Title IX Coordinator at **1-814-867-0099** or [titleix@psu.edu](mailto:titleix@psu.edu)
  - **To file an online report:** Visit the Office of Sexual Misconduct Prevention and Response's website at <http://titleix.psu.edu/filing-a-report/> to file an online report
  - **To file an anonymous report:** The Penn State Hotline is available 24/7 at **1-800-560-1637** or <http://hotline.psu.edu>. Both are anonymous and available 24/7
- **To file a complaint outside of the University:**
  - The Office for Civil Rights (Philadelphia Office) at **1-215-656-8541** or email [OCR.Philadelphia@ed.gov](mailto:OCR.Philadelphia@ed.gov)
  - The Equal Employment Opportunity Commission (Philadelphia District Office) at **1-800-669-4000**
  - The Pennsylvania Human Relations Commission (Harrisburg Regional Office) at **1-717-787-9780**

**\*\* Additional information regarding information and resources available in relation to incidents of sexual harassment and/or misconduct (including a campus-specific list of victim support services and confidential reporting options) can be found at <http://titleix.psu.edu/>**

### **Student Misconduct**

- Contact the Office of Student Conduct at **1-814-863-0342** or <http://studentaffairs.psu.edu/conduct> or report at [https://pennstate.qualtrics.com/jfe/form/SV\\_8qYxyWYciWERPGI](https://pennstate.qualtrics.com/jfe/form/SV_8qYxyWYciWERPGI)

Hazing by any student organization or individual is against Penn State's code of conduct, and also a violation of Pennsylvania law. To report instances of hazing within any student organization or group, including fraternities and sororities, contact the Penn State Hotline at **1-800-560-1637** or <http://hotline.psu.edu>.

### **Physical and Sexual Abuse**

Sexual and physical abuse is never appropriate and it is never your fault.

Here are resources for reporting sexual assault and relationship violence:



- Center for Women Students: 1-814-863-2027
- Office of Sexual Misconduct, Prevention & Response: 1-814-867-0099
- Centre County Women's Resource Center: 24-hour Hotline at 1-814-234-5050, or 1-877-234-5050
- Penn State Affirmative Action Office: <http://www.psu.edu/dept/aaoffice/shrp.htm>
- Pennsylvania Coalition Against Rape: 1-888-772-7227
- National Sexual Assault Hotline (RAINN): 1-800-656-4673
- Domestic Violence Hotline: 1-800-799-7233

Here is the university's policy: Policy AD85 – Sexual and/or Gender-Based Harassment and Misconduct (Including Sexual Harassment, Sexual Assault, Dating Violence, Domestic Violence, Stalking, and Related Inappropriate Conduct):

<https://guru.psu.edu/policies/AD85.html>

### **Mental Health and Suicide**

Your mental health and safety are more important than work. Suicide is never the solution. You need to take care of yourself. You are worth it.

The Penn State Counseling and Psychological Services (CAPS) provides free short-term counseling. You can meet individually with a therapist or attend group sessions. Find out more here: <http://studentaffairs.psu.edu/counseling/>.

CAPS Chat provides informal, drop-in consultation for students with counselors from Penn State Counseling & Psychological Services (CAPS). Sessions are free and no appointment is necessary. Students are seen on a first-come, first-served basis and meetings are no longer than 30 minutes. More information about CAPS Chat including times/locations can be found at the following link:

<http://studentaffairs.psu.edu/counseling/capschat.shtml>

### **If you are experiencing a mental health crisis:**

- Call Counseling and Psychological Services (CAPS) (Monday – Friday, 8am to 5pm) at 1-814-863-0395
  - CAPS provides crisis intervention services during the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday. Call or come to the CAPS office and **MAKE IT CLEAR THAT YOU ARE IN CRISIS**. Every effort will be made to respond as soon as possible. If you are in ongoing treatment at CAPS, you may ask to speak to your regular counselor or a crisis counselor.
- Call the 24/7 Penn State Crisis Line at 1-877-229-6400

- Staffed 24 hours a day by licensed counselors who can gather information, refer to appropriate resources and manage concerns for Penn State students.
- Text "Lions" to 741741 to reach a counselor at Crisis Text Line
  - This is a national crisis support line. Text with a trained crisis counselors 24 hours a day. Confidential and available in the US only.
- Go to the [Mount Nittany Medical Center](#) Emergency Department (Address: 1800 E Park Ave, State College, PA 16803,) or call them at 1-814-234-6110
  - The ER provides immediate care for severe crises such as drug or alcohol overdoses or serious suicidal or homicidal thoughts or urgent problems with psychiatric medications. Students may call 911 for ambulance service to the hospital.
- Call the Penn State Police at 1-814-863-1111 or call 911.
- The Employee Assistance Program, Health Advocate, is available 24/7 to you and your eligible dependents by calling 1-866-799-2728

#### Suicide Resources

- The Pennsylvania Suicide Prevention hotline is 1-800-273-8255. You can also visit their homepage: <http://www.sprc.org/states/pennsylvania>
- American Foundation for Suicide Prevention: <https://afsp.org/>
  - There is a Central PA chapter that can be reached at 1-857-202-7063, by twitter (@AFSPCentralPA), online (<http://www.afsp.org/centralpa>) or on Facebook (<https://www.facebook.com/AFSPCentralPA/>) They also organize a Centre County Walk Out of Darkness for suicide awareness and prevention every year.
- Mount Nittany Medical Center Emergency Department (1-814-234-6110)
  - Located at 1800 East Park Ave., State College, the Emergency Department can provide immediate care. Students may call 911 for ambulance service to the hospital.

Finally, one former student put together a list of things that anyone who is suicidal should do:

1. Eat your favorite food.
2. Listen to your favorite song.
3. Exercise. Go for a walk or ride your bike.
4. Watch your favorite video, or read your favorite story.
5. Finally, wait for the sun to rise. More suicides take place at night, but people often feel different during the day than they do at night.

### Other Crisis Services

- Psychiatric Medications:
  - If you are having a problem with a psychiatric medication, call the prescribing provider. If your problem is urgent or involves serious side effects, call or go to the Mount Nittany Medical Center Emergency Department (1-814-234-6110).
- Mount Nittany Medical Center Emergency Department (1-814-234-6110)
  - Located at 1800 East Park Ave., State College, the Emergency Department can provide immediate care for severe crises such as drug or alcohol overdoses or serious suicidal thoughts. Students may call 911 for ambulance service to the hospital.

### Taking a Leave of Absence

Penn State does not have an official policy in place for graduate students and post-docs, but there are guidelines in place, which can be found here: <http://gradschool.psu.edu/graduate-funding/infoga/paid-leaves/>.

If you need to take a leave of absence, you should speak to your advisor and get the appropriate forms from the administrative assistants. You can also find out more from the Absence Management within the Office of Human Resources, which takes care of all employee leaves of absence, including FMLA, medical, maternity, military, personal, work-related illness or injury\*, etc.

#### Contact Information:

Absence Management Team  
 405 James M. Elliott Building  
 120 South Burrowes Street  
 State College, PA 16801  
 Phone: 1-814-865-1782  
 Fax: 1-814-863-6227  
 E-mail: [absence@psu.edu](mailto:absence@psu.edu)

### Recognizing when graduate school is not the right path for you

There is no shame in leaving the program. It is not “quitting” or “failing”. Whatever the reason, there is nothing wrong with realizing that graduate school is not the best path for you at the time. You can always come back to graduate school later if that is what you want to do.

If graduate school is not the right path for you, you should speak to your advisor and get the appropriate forms from the administrative assistants.

Do not feel guilty. Again, your life is the most important thing, not work. You need to do what is right for you. You are worth it.