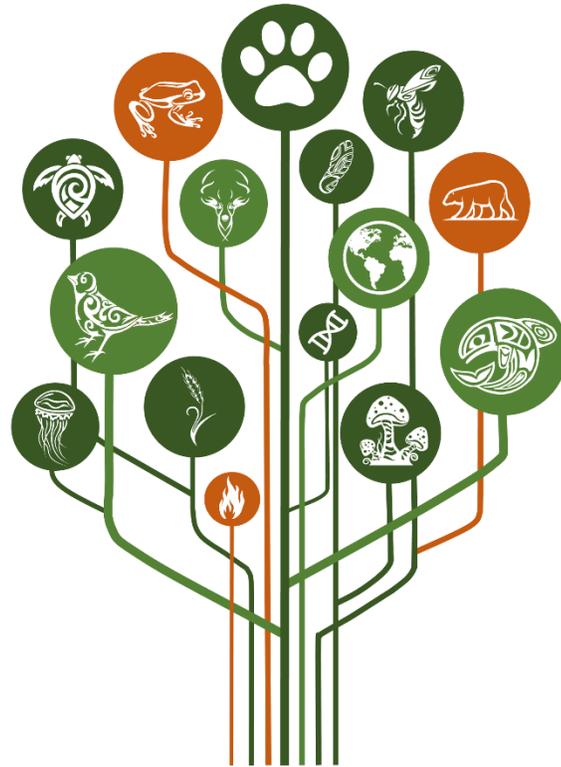


A Student's Guide to the PSU Ecology Program

PENN STATE



ECOLOGY

This booklet was written for students, by students. It is intended to provide helpful hints for navigating the Ecology Program curriculum and campus resources. All of the information is presented in an unofficial format, and should be cross-referenced with the official Ecology Handbook and other resources listed throughout the document.

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I. Academic

A) How to apply for course substitutions

Students may substitute courses outside of the curriculum listing in order to satisfy certain program requirements. This enables flexibility in meeting degree criteria when required courses are unavailable, relevant 'special topics' courses are offered, or previous courses taken fulfill Ecology course requirements. Decisions on waiving or substituting courses are made on a case-by-case basis by petitioning the Curriculum Committee. When petitioning the committee, you should provide a minimum of:

1. The Penn State course which you are trying to waive
2. The course name, course number, and the number of credits of the course you previously took. You should also provide a course description (syllabus or other relevant descriptor).

Contact: Margaret Brittingham-- mx21@psu.edu

B) Course requirements

If you are a Master's student, you will be required to take Advances in Ecology and two Colloquium credits. If you are a PhD student, you must take Advances in Ecology, Classical Ecology, and four Colloquium credits.

Both Masters and PhD students are also required to take credits in statistics and ecology-related core courses. The number of credits in these categories will depend on your degree, as well as your ability to waive credits. In total, Master's students must complete 30 credits. Ph.D. students do not need to earn a set number of credits but do need to fulfill the Graduate School's Residency Requirement (pre-Comps) and Continuous Enrollment Requirement (post-Comps).

1) ECLGY 515: Advances in Ecology

- Advances in Ecology is offered in the fall semester and must be taken by all PhD and Master's students. The class consists of several two-week modules instructed by different Ecology faculty, with each module relating to their field of expertise. One of these modules will also fulfill the university's Scholastic and Research Integrity (SARI) requirement. Additional details about SARI training will be provided during the class.

2) ECLGY 510: Classical Ecology

- Classical Ecology is offered in the fall semester and should be taken during the first year of study. During Classical Ecology, students will read foundational literature and discuss basic ecological concepts.

- All PhD students must take Classical Ecology, and Master's students may take Classical Ecology at the recommendation of their advisor and with the approval of the course instructor on a space-available basis.

3) ECLGY 590: Ecology Colloquium

- Colloquium is offered every semester and is an opportunity for students to practice public speaking skills and learn more about the research of other Ecology students. Every week a different student enrolled in the class will give a 30-minute presentation about their research, while students and faculty provide written feedback. *Active participation in Colloquium is expected of all Ecology students, even in semesters you are not enrolled in the course.*
- Master's students must register for two semesters of Ecology Colloquium (see "How to sign up for classes"). Suggested timeline: During your 2nd semester present a proposal talk outlining a research plan, and during your 3rd or 4th semester present your results.
- Ph.D. students must register for four semesters of Ecology Colloquium (see "How to sign up for classes"). **The first two semesters of Colloquium should be taken for credit** prior to taking the Comprehensive Exam, normally in the first 2-3 years of the program. **The two remaining semesters of Colloquium must be taken for audit**, either before or after the Comprehensive Exam (see "To schedule an audit" below). The first audited credit should correspond to a talk given at a national or international meeting; if the talk is given during the summer, enroll to audit Colloquium in the following fall semester. The final audited credit is a brief talk given at the Ecology minisymposium at the end of the semester in which you defend, or your public defense. The course will appear on the student's schedule as though it has been scheduled for credit, but will appear on the student's transcript with the grading symbol "AUS" and will not impact the GPA.
 - Potential timeline: During 1st or 2nd semester present a proposal talk or research conducted before arriving at Penn State, 3rd or 4th semester present (some) research results. During the final 2 years, present a talk at a national meeting (sign up to audit colloquium), and during the final semester sign up to present at minisymposium when talks are solicited (sign up to audit colloquium).
- **To schedule an audit for Colloquium:** Sign up for Colloquium as you normally would through LionPath, and then email Jean Pierce (jep32@psu.edu) and have her change it to audit. *Note: This process only applies to audits in Colloquium. To audit other classes, you should contact Jean Pierce or the Registrar.*

4) ECLGY 602: Supervised Experience in College Teaching

- All Ph.D. students must complete one semester of ECLGY 602. The purpose of this class is for you to work with an instructor of a course within your field to develop lectures, field trips, labs, etc. The class is personalized to you (i.e., there are no set requirements), and you can complete the class with any instructor of your choosing. Teaching assistantships can count towards your 602 credit, provided you are actively teaching and not just grading papers.

- Contact the instructor you want to take 602 with a semester in advance to establish expectations. Once you know which instructor you wish to take 602 with, contact Jean Pierce (jep32@psu.edu) so she can establish a section of the class for you.

5) Ecology-Related Core Courses ([APPENDIX 1](#)):

- All PhD and Master's students need to successfully complete two Ecology-related courses, totaling six credits. There are three categories of courses including 1) Molecular, Physiology, Behavioral, and Evolutionary Ecology, 2) Population and Community Ecology, and 3) Ecosystem, Landscape, and Global Ecology. It is recommended, for breadth of knowledge, that these courses come from two different categories. See Appendix 1 for a list of course offerings.

6) Statistics ([APPENDIX 2](#)):

- PhD students must complete two upper-level statistics classes and Master's students must complete one upper-level statistics course. "Upper-level" courses are typically at the 400 and 500- level, and DO NOT end in "1". Introductory courses (likes STAT 451 and 501) will not count. You may also be able to count classes outside of statistics towards this requirement. Popular choices include WFS 597B (Quantitative Methods in Ecology) and WFS 560 (Population Estimation and Modeling). See Appendix 2 for a more detailed list of classes that count towards the statistics requirements.

7) Additional Courses ([APPENDIX 3](#)):

- In addition to the required courses above, Penn State has a wide variety of classes that you may want to consider as you develop your program of study with your Committee. A list of these courses is provided in Appendix 3, and they can help you explore an area of deficiency, learn more about your study system, or may be of general interest. Depending on the class, you may be able to petition the Curriculum Committee to have them count towards your degree.
- Many students who are interested in careers in college teaching also find the Teaching Certificate worthwhile and fairly easy to obtain. More details can be found on the [Grad School website](#).

C) Timelines and tips for taking Qualifying and Comprehensive Exams (PhD Students)

Qualifying Exam: This is a broad, all-encompassing exam meant to assess your knowledge of the breadth of ecology (classical and modern, from soils to flora and fauna) and ability to deductively reason. This is administered by a four-person, program-appointed committee that is not the same as your advising committee. The exam consists of a four-hour long written exam and a culminating hour-long oral exam given approximately 2 weeks after your written exam. More specifics can be found on the [Huck website](#).

Timeline

- 1) *First semester*: Classes such as Classical Ecology and broad-topic seminars such as the Ecology seminar are great ways to learn qualifying exam material. See other suggested materials in "Tips" below.
- 2) *End of first semester*: Discuss with your advisor when they and you think you should take the qualifying exam. You have two attempts to take the exam, but it needs to be taken no later than your third semester. The examining committee may disqualify you from taking it a second time if your first attempt is during your third semester. Additionally, deciding on which semester you will take your exam allows you to better plan your class schedule and field work, and to allot time for studying.
- 3) *Semester of the exam (or earlier)*: Discuss with your cohort who else is taking the qualifying exam. Study groups of other Ecology program students are useful as everyone has a different topic with which they can help teach the others. Weekly or monthly study group meetings are useful for quizzing material, asking questions, and ensuring you are meeting your studying timeline goals.
- 4) *Semester of the exam (second or third)*: Keep an eye out for scheduling emails coming from the qualifying exam committee. You will need to indicate your intent to take the exam, the times you are available to take the written exam, and then the time you can take your oral exam. All of these plans will be determined via your psu.edu email starting around mid-semester.
- 5) *After the written but before oral exam*: Keep an eye out for an email from the EGSO regarding mock orals. This is a practice oral exam held by the EGSO and other volunteer graduate students who have already taken the qualifying exam. They will schedule this about a week before your official oral exams as a way to practice and also to answer any logistical questions.
- 6) *After finishing your oral exam*: You will be informed at the end of your exam if you have passed or not. Additional pieces of constructive criticism or suggestions for course study will be made verbally and later by notification in the mail.

Tips

- 1) Relevant books include the following. Do not feel like you have to buy and read all of these books. Library copies, grad student hand-me downs, and online copies exist for several of these. These are just suggested options if you'd like a resource guide or more food for thought.
 - a. Foundations of Ecology: Classical Papers with Commentaries (L.A. Real and J.H. Brown)
 - b. Big Questions in Ecology and Evolution (T.N. Sherratt and D.M. Wilkinson)
 - c. The Princeton Guide to Ecology (S.A. Levin)
 - i. The table of contents of this book have been shared as the unofficial "study guide" for the qualifying exam.
 - d. Analysis of Biological Data (M. Whitlock)
 - e. Blue Planet, Planet Earth, Life in Cold Blood, The Secret Life of Plants (any Attenborough nature documentary series is a good way to find neat examples and to take a break from studying, while still studying)

- 2) The written exam is a long time to be sitting still and thinking. Bring water, snacks, and feel free to get up to use the restroom and stretch. You will use your own laptop to take the exam. Bring headphones, as the moderator may permit you to listen to music.
- 3) The oral exam will start with introductions and a request for you to leave the room while they review your written answers and strategize on what questions they want to ask. At the end of the oral exam, you will be asked to leave again so they can discuss whether you passed and what deficiencies you may have. With these interruptions and pleasantries, this translates to roughly 40 minutes of being questioned by them.
- 4) The qualifying exam committee is not out to get you. You should feel free to ask them to repeat a question. Or you can put the question into your own wording and ask if that is correct in order to clarify. You can also ask to have a moment to think or you can use the whiteboard to draw relevant diagrams or figures.
- 5) Read up a little on the topics the committee members study. It's not unusual for them to draw from their own research or interests.
- 6) It is not wrong to say you don't know the answer. That should not be a default answer, and you should attempt to answer all questions. However, the point of the exam is to push you until the areas of which you lack knowledge are more evident. Be willing to hazard an answer based on what you know of other concepts/systems/ideas you do know. It is good to show you can extrapolate across systems and concepts.
- 7) Do not be afraid to ask for a minute to think over your response. A clear, coherent response will be best received by the committee.
- 8) Be nice, but confident. Some people get defensive when their responses are questioned, which doesn't allow you to expand on your breadth of knowledge and could offend the examining committee. Elaborate on responses, explain your rationale, and be confident but not cocky.

Comprehensive Exam: This exam is only taken by PhD students, and generally in the middle of their degree. It is a way to assess a student's knowledge specific to their proposed research interests and project. This exam is conducted by your advising committee, which includes your advisor and at least three other faculty. You should discuss with your advisor who should serve on your committee, but your committee must be made of faculty from several departments throughout the college. Guidelines for committee requirements and the necessary paperwork for declaring your committee can be found on the [Huck website](#).

In Ecology, the exact format of the comprehensive exam is currently not standardized. Exams vary from a proposal defense to a multi-day written and oral exam. Requirements for enrollment and credit hours during the semester of your comprehensive exam can be found on the [Huck](#) page, as well. The comprehensive exam can be scheduled anytime, but must occur several months before your final defense.

Timeline:

- 1) Talk to your advisor around the end of your second year of your PhD program to discuss their expected exam format and the timeline they envision for you to take your exam

- 2) Once a timeline is established, contact each of your committee members regarding the timing of your exam and the format expected. It is not unusual for a committee member to assign entire textbook(s) for you to study, so you should contact them several months in advance.
 - a) Feedback or disagreements about the format of your comprehensive exam are not yours to settle and should include your advisor in order to reach a finalized format
- 3) Once a format is agreed upon, give yourself and your committee members adequate time to prepare. For example,
 - a) If doing a proposal defense, give yourself time to write your proposal and revise it with your advisor prior to sending it to your entire committee
 - i) Your committee should be allotted at least two weeks to read and comment on your proposal prior to meeting with them
 - b) If doing a written and/or oral exam, email each committee member to ask for guidelines, topics, or recommended reading for their sections of the exam
 - i) Judge your ability to read, take notes, and synthesize material in order to set an appropriate timeline for studying
 - c) Coordinate with your committee to schedule the dates and times of your comprehensive exam
- 4) At least three weeks prior to the beginning of your exam, contact the Huck Graduate Education Office and let them know when your exam is scheduled
 - a) They will send your committee the necessary paperwork that will need to be signed on the day of your exam
- 5) After your comprehensive exams, your advisor will submit the finalized paperwork to the Huck Graduate Education Office. You should not be the one formally submitting the paperwork.
- 6) After you have passed your comprehensive exam, your tuition will be significantly reduced (which often means your advisor will have to pay less to support your appointment) because you should no longer be taking class. **Make sure you have completed the majority of your coursework (except your audited classes, such as the last two credits of colloquium) before taking your comprehensive exams.**
 - a) As you are now a post-comprehensive student, you will need to sign up for ECLGY 601- PhD Dis Full Time
 - b) There are no specified credit hours for this course
 - c) Your advisor will have a specific section available for enrollment on LionPath
 - d) If a section with your advisor does not appear, contact [Jean Pierce](#)

Tips:

- 1) This is your chance to really take some time and dive into the background and theory of your research
- 2) Spend some in-depth time reading and analyzing the suggested reading or topics your committee recommends including some of the topics on which they are experts
- 3) During written exams, make sure to plan ahead food or snacks so you can maintain your self-care even when strapped for time.

- 4) Establish a schedule for studying so you can incorporate it into your routine
- 5) If you have a written exam, it will be up to your committee as to whether it is open note or not, and whether you have to be on campus while taking the exam.
 - a) Make sure to discuss this with them and take queryable notes that are easy to reference for taking your exam
- 6) A good time to discuss the format and timeline for your comprehensive exams can be at your first committee meeting

D) Student-advisor Code of Conduct

Effective advising, open communication, and ethical professional conduct are essential for a high quality graduate education and research environment. Effective research advising must be based on a commitment to provide every student access to supportive guidance on a range of professional, ethical and collegial issues. A productive research mentorship requires that students are treated respectfully and fairly, and that the research advisor serves as a role model—upholding the highest ethical and professional standards. These guidelines embody many of the best practices used by the majority of our faculty here and elsewhere. They are intended to provide a heightened awareness of the need to consciously establish an effective and productive advisor-student relationship that starts with trust, courtesy, two-way communications, and shared expectations.

Faculty Research Advisors should:

- promote an environment that is intellectually stimulating, and free of harassment;
- be supportive, equitable, accessible, encouraging, and respectful;
- recognize and respect the cultural backgrounds of students;
- be sensitive to the power imbalance in the student–advisor relationship;
- avoid assigning duties or activities that are outside students' academic/professional responsibilities
- respect students' needs to allocate their time among competing demands, while maintaining timely progress towards their degree;
- advise graduate students on the selection of appropriate course work, an appropriate thesis topic and assist them in selecting a thesis committee;
- set clear expectations and goals for students regarding their academic performance and research progress
- discuss policies and expectations for work hours, vacation time and health contingencies;
- meet regularly and often with students to provide feedback on research activities and progress;
- provide students with training and oversight in all relevant aspects of research, including the design of research projects, the development of necessary skills, and the use of rigorous research techniques;
- avoid placing pressure on students to produce results that support particular hypotheses;

- devise effective ways of providing students with guidance and supervision during their prolonged absence;
- provide and discuss clear criteria for authorship at the beginning of all collaborative projects;
- encourage participation in professional meetings and try to secure funding for such activities;
- provide career advice, offer help with interview and application preparation, and write letters of recommendation in a timely manner;
- ensure students receive training in the skills needed for a successful career in their discipline, including oral and written communication and grant preparation as appropriate;
- acknowledge that some students will pursue careers outside of academia and/or outside their research discipline, and assist them in achieving their chosen career goals;
- schedule meetings to discuss topics other than research, such as professional development, career objectives and opportunities, climate, laboratory personnel relations, etc;
- be a role model by acting in an ethical, professional, and courteous manner toward other students, staff, and faculty.

Graduate Students should:

- recognize that they bear the primary responsibility for the successful completion of their degree;
- exercise the highest ethical standards in all aspects of their research (including but not limited to collection, storage, analysis, and communication of research data);
- complete all tasks assigned by the department, including teaching, grading and other assistantship responsibilities;
- know the policies governing graduate studies in the department and the graduate school and take responsibility for meeting departmental and graduate school deadlines;
- be proactive about communicating with your advisor and thesis committee, understanding that communication is a two-way endeavor;
- be considerate of other time constraints imposed on faculty and staff, including competing demands;
- take an active role in identifying and pursuing professional development opportunities;
- clearly communicate with their advisor(s) regarding their career preferences;
- be proactive about improving their research skills, including written and oral presentation skills;
- inform faculty advisors of potential and/or existing conflicts and work toward their resolution;
- seek mentoring and support resources beyond their faculty advisor(s), including other faculty members, peers, and organizations;
- obtain outside help from ombudsmen, graduate chairs, or other faculty if conflicts arise with their advisor;

- be aware that if they feel compelled to change advisors or research direction, they have options and should consult with their advisor, other mentors, or department officers;
- always act in an ethical, professional, and courteous manner toward other students, staff, and faculty.

Departments and Programs will:

- provide students with up-to-date information that includes policies, practices, degree requirements, and resources;
- assist students with selection of their advisor as needed, and provide students with contacts and resources for potential conflict resolution (e.g. ombudsperson, director of graduate studies, department head);
- provide pedagogical training and regular assessment of their teaching and other assistantship activities;
- monitor graduate student progress towards their degrees and professional development, including mentoring meetings, committee meetings, exam completions and other benchmarks appropriate to their discipline;
- provide and monitor training in the ethical conduct of research;
- provide appropriate infrastructure to allow students to complete their education and research in a timely and productive manner;
- provide opportunities for professional development that will be relevant to students seeking careers outside academia and/or their research discipline;
- establish and communicate policies for emergencies and unplanned situations that may disrupt the work of students and/or faculty;
- incorporate these guidelines and recommendations in their departmental policies or handbooks and actively promote their observance.

Reporting Misconduct or Conflict Resolution Resources

If you feel that the conduct listed above has not been followed or an instance of serious research or personal misconduct as detailed below has been committed by a student, faculty, or staff member, there are important resources available for reporting these grievances.

1) Harassment, Discrimination, and Title IX Violations

- As per the University's [own policy](#):
 - i. *Sexual harassment* is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature that is unwanted, inappropriate, or unconsented to.
 - ii. *Gender harassment* is defined as behavior consisting of physical or verbal conduct based on gender, sexual orientation, gender-stereotyping, perceived gender, or gender identity, but not involving conduct of a sexual nature, when such conduct is sufficiently severe or pervasive such that it substantially interferes with an individual's employment, education or ability to participate in or benefit from University programs,

activities or opportunities. This may include, but is not limited to, verbal or physical attacks, graphic or written statements, threats, or slurs.

- iii. *Sexual misconduct* is comprised of several forms of sexual harassment and sexual assault that include, but are not limited to, rape, unwanted touching, sexual battery, sexual coercion, and non-consensual sexual activity. Other forms of prohibited conduct include stalking, domestic violence, and dating violence including conduct off-campus.
 - iv. *Discrimination* is defined as the unjust or prejudicial treatment of any person because of age, race, color, ancestry, national origin, religion, creed, service in the uniformed services (as defined in state and federal law), veteran status, sex, sexual orientation, marital or family status, pregnancy, pregnancy-related conditions, physical or mental disability, gender, perceived gender, gender identity, genetic information or political ideas. Discriminatory conduct and harassment, as well as sexual misconduct and relationship violence, violates the dignity of individuals, impedes the realization of the University's educational mission, and will not be tolerated.
- Penn State University employees (unless specified as Confidential Employees) are required to report instances of suspected or reported sexual misconduct
 - Reporting of sexual misconduct should be made to the:
 - i. Main Title IX Coordinator: Danny Shaha, 120 Boucke Building, (814) 863-0342, jds49@psu.edu or titleix@psu.edu
 - ii. Deputy Title IX Coordinators For Conduct Committed by Students or Student Organizations: Karen Feldbaum, (814) 863-0342, kxf6@psu.edu
 - iii. For Conduct Committed by Employees or Third-parties: Carmen Borges, (814) 863-0471, aao@psu.edu
 - iv. [Online reporting](#) is also available
 - For individuals who would like to confidentially and anonymously report sexual misconduct or gender-based harassment or other types of prohibited conduct, please visit the [Penn State Ethics and Compliance Hotline](#)
 - For individuals who would like to file a complaint regarding discriminatory actions or behaviors, please contact the [Affirmative Action Office](#), visit their [website](#), or [report](#) observed on- and off-campus bias
 - More details as to prohibited sexual, gender, or discriminatory harassment and how to handle it can be found through the [Penn State Office of Sexual Misconduct Prevention and Support](#), through [annual compliance training](#), or through the university's [Stand for State](#) organization.

2) Research Misconduct

- Similarly to above, student should report misconduct observed by other students, faculty, and staff
- This can include fabrication and/or falsification of data or plagiarism, and more details can be found via the [Office for Research Protections](#)

- Anonymous reporting can be done by the [Penn State Ethics and Compliance Hotline](#)

3) Conflict Resolution

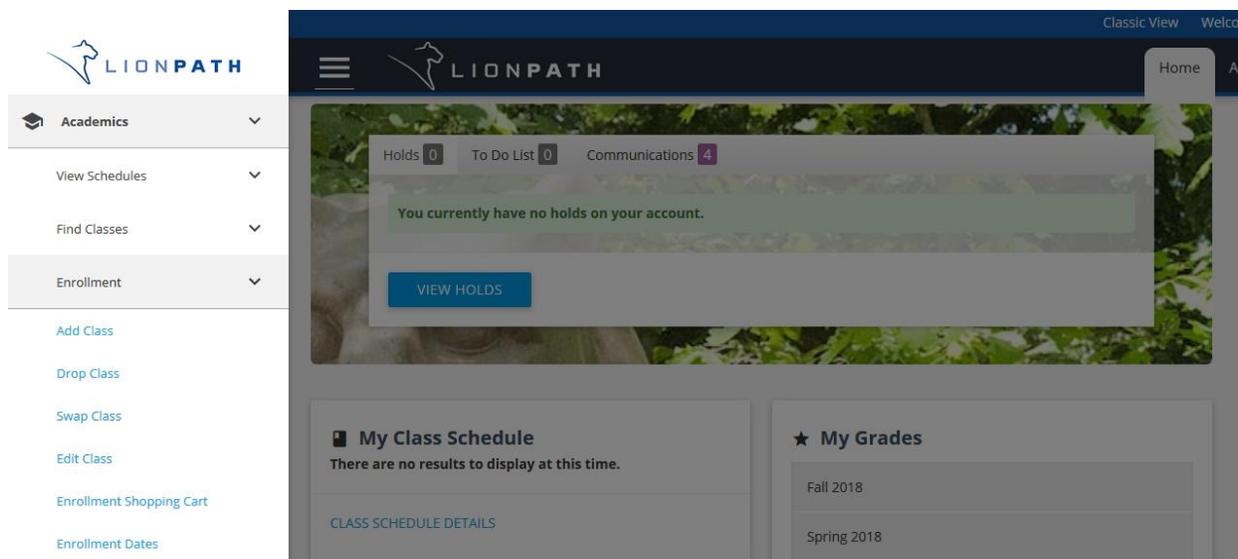
- The Affirmative Action Office provides a free Conflict Management Service to faculty, staff and administrators in resolving conflict that may accrue from discrimination and/or harassment, offers resources for addressing and resolving work-related conflicts, and promotes the value of addressing differences before they become formal grievances.
- For more information, please contact the Affirmative Action Office, Conflict Resolution Services at 814-863-0471 or resolveconflict@psu.edu
- Additional tips on independent third party resolution or problem solving can be found by writing to your department's ombudsperson (e.g., [Biology](#)) or department head
 - i. University Ombudsperson: Pamela Hufnagel, Assistant Professor of Education at PSU DuBois, pph1@psu.edu, (814) 375-4839

E) How to sign up for classes

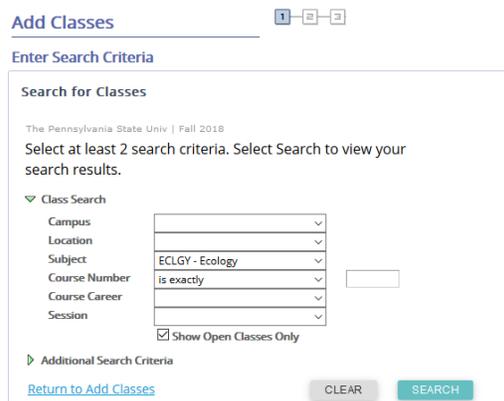
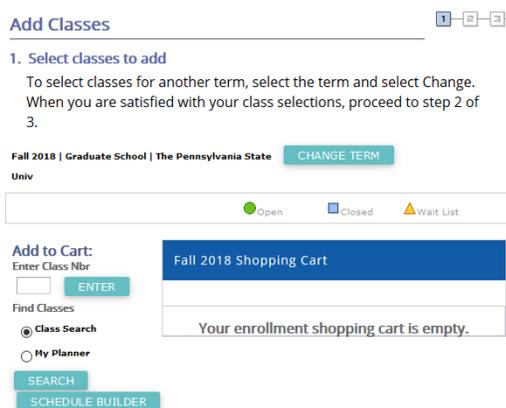
To sign up for classes, go to lionpath.psu.edu, where you will need to sign in. Once signed in, the LionPath homepage should appear (see below):



From here, click on the left-hand menu. Under **Academics**, choose **Enrollment** and then **Add Class**.



You will be redirected to a page to select which term you are adding a class to. This will begin a three-step process. For the first step, choose the **Class Search** option. You can then filter class suggestions based on the campus, location, subject, course number, course career, or session length. There is also a marked box underneath the dropdown menus to filter out classes that are fully enrolled.



A list of classes will show up based on the search criteria. The class suggestions will show the class number, class section, date and time, room number, instructors, and a status indicating whether the class is open for enrollment. Only one class can be selected at a time. If the class has a lab, the lab will be suggested in step two.

60 class section(s) found

ECLGY 510 - Classical Ecology						
Class	Section	Days & Times	Room	Instructor	Meeting Dates	Status
24446	001-LEC Regular	We 1:25PM - 3:20PM	Ag Engineering 115	David Miller, Tomas Carlo-Joglar	08/20/2018 - 12/07/2018	● SELECT

ECLGY 515 - Advances in Ecology						
Class	Section	Days & Times	Room	Instructor	Meeting Dates	Status
24448	001-LEC Regular	TuTh 10:35AM - 11:50AM	Ag Science & Industries 011	David Elissenstat	08/20/2018 - 12/07/2018	● SELECT

After selecting a course, the next page will provide more enrollment information. If you click **Next** instead of **Cancel**, the class will be added to your Shopping Cart. *You are not enrolled yet.* The shopping cart keeps classes you're interested in all in one place while you browse, even if prerequisites are not met or classes have conflicting schedules. To enroll in the class, click the button **Proceed to Step 2 of 3**. You'll then be brought to a page to confirm enrollment. To enroll, click **Finish Enrolling**.

Add Classes

2. Confirm classes
Select Finish Enrolling to process your request for the classes listed. To exit without adding these classes, select Cancel.

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● Open ■ Closed ▲ Wait List

Class	Description	Days/Times	Room	Instructor	Units	Status
ECLGY 510-001 (24446)	Classical Ecology (Lecture)	We 1:25PM - 3:20PM	Ag Engineering 115	T. Carlo-Joglar, D. Miller	2.00	●

[CANCEL](#) [PREVIOUS](#) [FINISH ENROLLING](#)

[Search](#) [Plan](#) [Enroll](#) [MyAcademics](#)
[My Class Schedule](#) [Add](#) [Drop](#) [Swap](#) [Edit](#) [Term Information](#)

The third step will be the results page. If any prerequisites are unmet or there is a conflict with a class you are already enrolled in, there will be an error message for you to follow-up on. Otherwise, you will be enrolled! From here, you can either add another class or view your class schedule.

II. Financial

A) Sources of travel money

- I. Ecology Program: Frank A. Andersen Travel Award
 - A. Supports conference travel
 - B. At least one, \$500 award is given annually
 - C. The number of awards, and the amount award, varies annually and is up to the discretion of the Andersen Travel Award selection committee.
 - D. Applications are due between January–March for conferences that calendar year; applicants must be presenting at the meeting for which they are requesting travel funds for
 - E. https://www.huck.psu.edu/content/graduate-programs/ecology/financial_aid/FAAndersenncial_aid/travel_stipend
- II. PSU Graduate School professional meeting travel award
 - A. Supports conference travel
 - B. Students can apply once per year for this \$200 award. Preference will be given to students that have not received this award previously
 - C. Must be senior author of a poster or oral presentation (oral presentations will be preferred)
 - D. Applications are through the Andersen Award application process
- III. PSU Huck Institutes: Huck Institutes Graduate Travel Award
 - A. Supports conference travel
 - B. Students can receive award twice during their degree, but only once per fiscal year (July–June) and only once for international travel. You can can apply anytime of year
 - C. Up to \$750 for domestic travel and \$1500 for international travel; applicants must be giving a poster or talk at the selected conference
 - D. Awards are decided by the Ecology Chair
 - E. <https://www.huck.psu.edu/content/graduate-programs/ecology/fina>
- IV. Global Penn State: Global Programs Graduate Student Travel Grants
 - A. Supports international conference travel and professional meetings
 - B. Up to \$750, awarded twice per year (September 15, February 15). It is unclear if students can receive this award more than once during their degree
 - C. Applications require letter of support from faculty advisor
 - D. <https://global.psu.edu/article/global-programs-graduate-student-travel-grants>
- V. PSU College of Agriculture and Science:
 - A. Supports conference travel
 - B. Up to \$500 award once during a student's career
 - C. You must be presenting a poster or talk at the conference
 - D. Your advisor must have a home department within the College of Agricultural Sciences
 - E. https://agsci.psu.edu/graduatestudents/funding-opportunities/copy_of_travel-awards

- VI. There may be more travel options specific to your department or college. Please email the EGSO president with additional grants to add to the list.

B) Research grants students have had success receiving

There are many opportunities for additional funding to support research or stipend/tuition, and Penn State Ecology students have a history of success with receiving prestigious external fellowships. The grants listed below are organized on whether the funding source is within or outside Penn State. Additionally, there are other awards (e.g., Outreach Award, Alumni Association Dissertation Award) that are given to students closer to graduation with a monetary prize.

Within Institution Funding					
Grant Name	Grant Type	Amount	# Years	Year of Graduate Degree	Website
Academic Computing Fellowship	Research	Tuition, fees, stipend	3 years maximum	Doctoral	http://gradschool.psu.edu/graduate-funding/fellowships/programs/computing/
College of Agricultural Sciences Competitive Grant	Research/payroll	\$3,000 (PhD) \$2,000 (Masters)	6 months	Doctoral (Post-Candidacy) Masters (third semester)	https://agsci.psu.edu/graduatestudents/funding-opportunities/grants
Graduate Student International Research Award	Research/travel/living	Up to \$5000			https://psu.infoready4.com/#competitionDetail/1764717
Outside Institution Funding					
Grant Name	Grant Type	Amount	# Years	Year of Graduate Degree	Website
NSF: Graduate Research Fellowship Program (NSF-GRFP)	Research	\$34,000/year and \$12,000 for tuition	3 years	1 st year Masters or PhD	https://www.nsfgrfp.org/
USDA: National Institute of Food and Agriculture	Research	Stipend, tuition, insurance, and research	2 years maximum	Post-candidacy	https://www.nifa.usda.gov/program/agriculture-and-

(NIFA) Agriculture and Food Research Initiative (NIFA-AFRI)		Up to \$120,000/award period			food-research-initiative-afri
Annie's: Sustainable Agricultural Scholarships	Personal	Up to \$10,000	1 time payment	Undergrad or Grad	https://www.annies.com/giving-back/agricultural-scholarships
NASA: The Pennsylvania Space Grant Consortium Graduate Research Fellowship	Research	\$5,000/academic year	1 year	All graduate students, see Colleges	https://sites.psu.edu/paspacegrant/opportunities/fellowships-2/fellowships/
Harris Fellowship from METER	Research	\$10,000 in research instrumentation		Graduate	https://www.metergroup.com/company/grant-harris-fellowship/

III. The EGSO

The EGSO is comprised of all graduate students in the Ecology Program. The EGSO meets approximately once a month to discuss program events, as well as opportunities we see for improvements and suggestions. Feedback from the EGSO is vital for maintaining the success of the program. Active involvement in the EGSO is a great resume builder, and can improve your success at receiving departmental funding and assistantships.

Why become an officer of the EGSO?

We encourage anybody who sees interest in any of the officer descriptions in [Appendix 4](#) to nominate themselves for their position(s) of choice. Becoming an officer of the EGSO means you will have the power to make an impact in the ecology program where you see fit. Think the normal social activities are boring? Have some concerns about curriculum standards? Think we could do a better job at circulating information? Get involved and be a part of a positive change! Not only does becoming an active member of the EGSO allow you to become integrated within the program, but it is an awesome opportunity to meet new, successful students outside of your cohort. It brings about more opportunities to speak directly to your program chair, and stay connected with current ecology program news. Becoming an officer also helps other students and faculty to get to know *you*, allowing you to be noticed for your leadership potential and interest in your program.

How to become an officer of the EGSO?

At the end of every fall semester, the standing EGSO President will send out an email, asking for nominations for next year's officers. This is your opportunity to nominate someone who you think would do a great job, or to nominate yourself if you are interested (all nominations are

held anonymous between yourself and the current standing president). An informal poll will then be circulated, and the nominees with the majority of votes in each category will be elected as the new round of EGSO officers.

IV. Student life

A) Counseling services

Penn State CAPS (Counseling and Psychological Services) is a resource available to all graduate students, and is located conveniently on campus in the Student Health Center. CAPS provides “group and individual counseling, crisis intervention, and psychological and psychiatric evaluations as well as prevention and consultation services.” Check out their website for a full overview of services (<https://studentaffairs.psu.edu/counseling>). Here are a few highlights that might be of particular interest to graduate students:

- Short term counseling services: individual therapy, couples therapy, counseling for eating disorders, and veteran services. Call 814-863-0395 to set up a phone screening appointment.
- Community Provider Database: easily search for private mental health care providers in the communities surrounding Penn State campuses.
- Group counseling: general therapy groups for all students, groups for particular populations (e.g. graduate students, women, men, underrepresented populations) and specific issues (e.g. stress, depression, assault). The starting dates for the groups will vary. Enrollment is free and can be made directly through a therapist at CAPS. Confidentiality is strictly respected. Call 814-863-0395 to set up a phone screening appointment.
- “Life Hacks” workshops: check schedule on CAPS website, currently held in room 540 Student Health Center from 4:00 p.m.-5:00 p.m. These workshops include topics such as Sound Sleep Strategies, Managing Expectations, Mindfulness, Cultivating Self-Compassion, and Managing the Stress of Change.

Additionally, check out the Health & Wellness student affairs page (<https://studentaffairs.psu.edu/health-wellness>) for links to other resources including Alcohol & Drug Education and Recovery, Healthy Living (stress management, sleep, health eating, smoking cessation), and other wellness resources.

CONTACT:

501 Student Health Center, University Park, PA 16802

Hours: Monday - Friday, 8:00 a.m. - 5:00 p.m.

Phone: (814) 863-0395

[Contact Form](#)

Crisis Services (24/7) Penn State Crisis Line: 1-877-229-6400

Crisis Text Line: Text “LIONS” to 741741

B) Tips for balancing work and social life

You are in the real world. There is a tendency among graduate students to only refer to life *outside* academia this way, but do not fall into that mindset. You are as valuable as someone working a 9-5 job, and your desire to have a healthy work-life balance is just as valid; feeling otherwise can lead to low self-esteem and dismissal of basic needs. Getting your degree does not mean you've paused or delayed your life, so it should not come at the cost of your mental or physical well-being; it is important to keep your hobbies and your social life so that you can enjoy your research without being consumed by it.

As a real person in the real world, how can you achieve your goal while treating yourself with kindness? The following suggestions for tending to your health and perfecting your time-management skills may help. Know that different strategies will work for different people, and, *before* all else fails, ask for help when you need it.

Mental and physical health tips:

- Exercise, eat right, and get enough sleep, or your school work will suffer. Campus resources, such as the Nutrition Clinic, can help.
- As you were taught in elementary school, keep your eyes on your own paper. Your fellow students may have very different projects with different timelines and different requirements, making a comparison unfair and useless. Focus on yourself.
- That being said, there are some universal experiences that graduate students face, such as the imposter syndrome; bonding with people who share your insecurities is comforting. Make an effort to attend social events and connect with other students in the program.
- Try to incorporate social time throughout the day by having lunch with your lab mates or attending a group fitness class.
- Be cautious about venting to other students; while sharing insecurities can be reassuring, compounding complaints can leave you feeling more anxious than before. Try voicing your frustrations with someone outside academia who can be more objective and listen without piling on their own grievances.
- Consider writing a gratitude journal; a positive attitude makes a big difference.
- Keep visual motivators nearby to help you during times of self-doubt; this can be a complimentary email from a professor on your phone or a photo of your family on your desk.
- Remember your overall goal; you can write this down and have it displayed nearby as well. When a small setback arises, think about whether it will stop you from reaching this goal—if not, don't beat yourself up over it. Concentrate on the big picture.
- Give yourself permission to actually relax; spending downtime feeling guilty about not working won't help you recharge.

Time management:

- Have a conversation with your advisor about their expectations for your time, i.e. number of hours spent grading, in the lab, etc. If you TA for a professor other than your

advisor, or you have co-advisors, it is especially crucial to communicate well—the last thing you want is for each to expect a full-time commitment.

- Try out new techniques, or revisit old ones. Your favorite methods for staying organized may change over time; be open.
- Pay attention to your personal habits: do you work best in the morning? Do you get a second wind of energy around 9 at night? Use this to your advantage and schedule yourself accordingly.
- If you don't already have a calendar and a planner, whether paper or electronic, get on it; both will help you stay on top of your responsibilities and deadlines. It may also help to have a place to write down impromptu thoughts so you don't forget about them later.
- If your to-do list is piling up and you feel frantic about when everything will actually get done, try putting small tasks or errands (like grocery shopping or reading a paper) directly into your calendar rather than your planner; you can also try blocking out larger chunks of time for bigger tasks.
- When planning ahead, don't schedule yourself down to the minute; if you leave extra time, you won't panic when a task inevitably takes longer than anticipated.
- Setting and achieving daily goals will help you feel accomplished instead of overwhelmed; this may mean breaking down larger responsibilities into smaller, more manageable pieces.
- The Eisenhower method can help you identify what your goals for the day should be by ranking tasks according to importance and urgency:

THE EISENHOWER BOX

	URGENT	NOT URGENT
IMPORTANT	<p>DO <i>Do it now.</i></p> <p>Write article for today.</p>	<p>DECIDE <i>Schedule a time to do it.</i></p> <p>Exercising. Calling family and friends. Researching articles. Long-term biz strategy.</p>
NOT IMPORTANT	<p>DELEGATE <i>Who can do it for you?</i></p> <p>Scheduling interviews. Booking flights. Approving comments. Answering certain emails. Sharing articles.</p>	<p>DELETE <i>Eliminate it.</i></p> <p>Watching television. Checking social media. Sorting through junk mail.</p>

*"What is important is seldom urgent and what is urgent is seldom important."
-Dwight Eisenhower, 34th President of the United States*

- Prioritizing responsibilities means you will need to practice saying NO; it is okay to be selfish sometimes.
- No one is capable of working for hours upon hours without their efficiency suffering; taking a break is not a luxury to feel guilty about, but an important action to stay productive and maintain high quality results. Some research shows that peak productivity is realized by focusing for 52 minutes, then taking a break for 17 min; others prefer the Pomodoro method, wherein you work for 25 min, break for 5 min, and repeat, with a longer rest of 15-30 min every fourth break. Regardless of which method you like, timers can be a great tool to regulate your breaks.
- To make the most of the time you spend working, put away your phone and other distractions; set aside one or two times a day to check email or other apps (and ignore them otherwise).
- Use location to your advantage. For some, arriving to and leaving from campus at the same time each day provides the necessary structure to focus; for others, switching up locations throughout the day is energizing.
- Change the way you view 'dead space' in the day; think about a 20 min break between classes as a time to take a walk, talk to a friend, or meditate; you'll get more out of the day this way.

C) Insurance and University Health Services

Penn State Student Health Insurance Plan (SHIP)

The below is intended as a rough guide to help you navigate the health insurance plan(s) offered by Penn State. It is designed as a "quick guide" to answer common questions about the insurance plans and help you decide if you should enroll in the Penn State insurance plans. While the information is correct to be the best of our knowledge, we would recommend contacting University Health Services (<https://studentaffairs.psu.edu/health-wellness/health-insurance>) for verification of any information.

What is the SHIP?

- The SHIP (Student Health Insurance Plan) is a university-subsidized option for medical insurance for graduate assistants. All graduate assistants are automatically enrolled in the SHIP unless you indicate otherwise. If you do not enroll in the SHIP, you may have to provide proof of comparable coverage.
- The SHIP is actually three separate plans: medical, dental, and vision. You can choose to opt in/out of any or all of these.
- The SHIP also covers spouses and dependents through several family plans. Go online to see the best option for you.
- Unlike many health insurance plans that reset on the first of the calendar year, the coverage year for SHIP aligns more closely with the academic year and starts and ends in mid-August. This will reset your member balances (deductibles, maximum out of pocket expenses), and you will also have to re-visit UHS to receive a new referral for any off-campus doctors you are seeing (see below for more details about referrals).

- Some of the SHIP providers do not automatically mail you an insurance card. While it isn't absolutely necessary to have one (you can access it on your phone or print it off), the laminated card is often more convenient. Once you are enrolled in SHIP coverage, you can go online to each insurance provider and have them send you an insurance card, free of charge. Regardless, it's not a bad idea to establish an account with each provider as it helps keep track of your member balances and claims.

SHIP Medical Coverage

- SHIP medical insurance is offered through UnitedHealthcare. Overall, the medical SHIP provides excellent medical insurance, but there are some nuisances about using it.
 - As of the 2018/2019 year, Penn State subsidizes 80% of the cost of medical insurance. This means that you will pay \$732.60 per year (for a single student), and the cost is automatically deducted from your paycheck with \$70.95 and \$89.75 deducted each month in fall and spring, respectively. These numbers will change every year, but serve as a basis of comparison. The cost is also higher for family plans.
 - In 2017/2018, the deductible for the SHIP plan was \$250 (\$500 for family plans), co-insurance for Preferred Providers was 90%, and maximum out of pocket for Preferred Providers was \$1,300 (\$2,600 for a family plan). These numbers are likely to change from year-to-year, but serve as a baseline to help you decide whether the SHIP is a good plan for you.
 - Most services provided by University Health Services (UHS) are free of charge (including most X-rays, lab work, ultrasounds, etc.). UHS is a convenient location on-campus to take care of routine medical problems (illness, injury, annual exams), but sometimes falls short of providing the best diagnostic care.
 - If you are within a 25-mile radius of campus, you must get a referral to see a doctor that is not at UHS. The exception is for cases of emergency, during breaks and holidays when UHS is closed, and for maternity, obstetrical, and gynecological care. Don't worry, the doctors at UHS are very familiar with students coming in just to seek a referral to a specialist.
 - If you are outside of the 25-mile radius, you can use any doctor that is on the list of Preferred Providers, but it will not be free. Generally the SHIP coverage for in-network visits is good (upwards of 90%, depending on the reason for the visit). Many health care practices are on the list of Preferred Providers, so it's usually not hard to find a doctor in-network if you are away from State College.
 - The certificate of coverage, which provides a detailed explanation of what is and is not covered by the SHIP can be found at <https://www.uhcsr.com/uhcsrbrochures/Public/ClientBrochures/2017-203281-2%20Brochure-Certificate.pdf>.
- If you are on the SHIP, you'll likely be going to UHS often (or, even if you're not but your insurance covers UHS). Some tips for using UHS:
 - Appointments can be made online (<https://studentaffairs.psu.edu/health-wellness/medical-services/myuhs>) or over the phone.
 - Ask around to find a recommended practitioner. Some are better than others.

- UHS also has resources for counseling, nutrition, immunizations, and physical therapy. Many of these resources are not free with the SHIP (except for physical therapy, as SHIP provides 40 free visits), so it's best to call UHS and inquire about costs before making an appointment.
- The UHS pharmacy can fill prescriptions and has a small drug store in the lobby for some of the most common over the counter needs.
- If you need to have medical records transferred (which is often the case if you need to be seen by a specialist), have UHS do it for you. It can often save you a lot of time and hassle.
- If your spouse is on your SHIP, they can also be seen at UHS and receive the same benefits as you. They will need to get their own identification number so they can make and check-in for appointments (otherwise, you will have to do it for them). There are no pediatric services offered at UHS.

SHIP Dental Coverage

- SHIP dental insurance is offered through United Concordia
 - As of the 2017/2018 year, Penn State subsidizes 80% of the cost of medical insurance. This means that you will pay \$51.31 per year (for a single student), and the cost is automatically deducted from your paycheck with \$4.29 and \$6.83 deducted each month in fall and spring, respectively. These numbers will change every year, but serve as a basis of comparison. The cost is also higher for family plans.
 - There is no deductible if services are provided by an in-network provider, but the deductible is \$1000 if services are performed by an out-of-network provider. The maximum out-of-pocket is \$1,000.
 - Every contract year, the SHIP will cover two routine exams, two x-rays, and two cleanings. For more complex procedures, the SHIP will cover 60-80% of the cost. The exception is orthodontics, which are not covered.
 - Many dentists in Centre County accept United Concordia. It may also be possible to have routine exams covered by an out-of-network dentist.

SHIP Vision Coverage

- SHIP vision insurance is offered through Highmark Blue Shield (Davis Vision).
 - As of the 2017/2018 year, Penn State subsidizes 80% of the vision plan. This means that you will pay \$59.84 per year, and the cost is automatically deducted from your paycheck with \$1.01 and \$1.58 deducted each month in fall and spring, respectively. These numbers will change every year, but serve as a basis of comparison. Family plans are also higher.
 - The plan includes an eye examination every 12 months. It will also cover, in full, standard eyeglass lenses (progressive, tinted, polarized, etc. cost extra), frames (designer and premium frames can cost extra), and daily wear contact lenses if obtained from an in-network provider.

D) Entertainment and Recreation

While in your graduate program, there are also many social opportunities to engage with other graduate students and the State College and surrounding communities. These events can include outdoor and indoor recreation, food and drink, and seasonal and annual festivals.

- General Community Calendar Websites
 - Statecollege.com
 - WPSU Community Calendar
 - <http://radio.wpsu.org/community-calendar>
 - Central Pennsylvania Convention and Visitors Bureau
 - <http://www.visitpennstate.org/events>
 - Penn State News Events Calendar
 - news.psu.edu/calendar
 - PA State Park Calendar of events (many nearby)
 - <http://events.dcnr.pa.gov/>
- Recurring Seasonal Events
 - Fall
 - Oktoberfest at Tussey Mountain— tusseymountain.com/Oktoberfest
 - Punkin' Chunkin' fall festival at Bald Eagle State Park
 - Cranberry Festival at Black Moshannon State Park
 - Hay rides at Harner Farm
 - Pumpkin Carving Festival at the Arboretum at Penn State
 - Winter
 - Skiing, snowboarding and tubing at Tussey Mountain Ski Lodge
 - Snowfest at Greenwood Furnace State Park
 - First Night State College Celebration—New Year's Eve
 - Cross country skiing in local State Parks and Forests
 - Spring
 - Banff Film Festival
 - Dirtfest Mountain Bike Festival—Hesston, PA— pa.dirtragdirtfest.com
 - Movin' on Spring Music Festival – Bryce Jordan Center - <http://www.movinon.org/>
 - Summer
 - Wingfest—tusseymountain.com/wingfest
 - Strawberry Picking at Way Fruit Farm
 - Whipple Dam State Park summer concert series
 - Yoga on the Beach at Whipple Dam State Park
 - 4th Fest—State College, PA— 4thfest.org
 - Arts Fest—State College, PA— arts-festival.com
 - The People's Choice Arts Fest—Boalsburg, PA—peopleschoicefestival.com
 - Seven Mountains Wine Cellars summer bonfire/music series--sevenmountainswinecellars.com/

Year-round Entertainment and Recreation

- Local Brewpubs
 - Happy Valley Brewery—State College, PA
 - The Elk Creek Café—Milheim, PA—elkcreekcafe.com
 - Otto's Pub and Brewery—State College, PA—
 - Robin Hood Brewing Co.— robinhoodbrewingco.com/
- Local Wineries and Distilleries
 - Happy Valley Vineyard and Winery— State College, PA— thehappyvalleywinery.com
 - Mount Nittany Vineyard and Winery—Centre Hall, PA—mtnittanywinery.com
 - Seven Mountains Wine Cellars—Spring Mills, PA— sevenmountainswinecellars.com
 - Brookmere Winery—Belleville, PA— brookmerewine.com
 - Big Springs Spirits—Bellefonte, PA—bigspringspirits.com
- Local Farms, Famers Markets and Community Supported Agriculture (CSA's)
 - Tait Farm—taitfarmfoods.com
 - Village Acres Farm and Foodshed—Mifflintown, PA—villageacresfarm.com
 - Way Fruit Farm—Port Matilda, PA—wayfruitfarm.com
 - Harner Farm—State College, PA
 - Meyer's Dairy—State College, PA—meyerdairy.weebly.com
 - Boalsburg Farmer's Market—boalsburgfarmersmarket.com
 - Pine Grove Mills Farmer's Market
 - PSU Community Garden—psugarden.org
- Downtown State College Farmers Market
 - Escape Rooms-- statecollege.iqescape.com/
 - The State Theater—State College, PA—thestatetheater.org
 - Webster's Bookstore Café—State College, PA— webstersbooksandcafe.com
 - Millbrook Marsh Nature Center— State College, PA—crpr.org/millbrook-marsh-nature-center
 - Stone Valley Recreation Area—Petersburg, PA— studentaffairs.psu.edu/facilities-spaces/campus-recreation-facilities/stone-valley-recreation-area
 - Shaver's Creek Environmental Center—Petersburg, PA— shaverscreek.org/
 - State College YMCA
 - Pool, Fitness equipment, rock climbing, various classes
- State Forests and Parks—dcnr.pa.gov
 - Bald Eagle State Forest
 - Rothrock State Forest
 - Whipple Dam State Park
 - Greenwood Furnace State Park
 - Bald Eagle State Park
 - Black Moshannon State Park
 - Poe Valley and Poe Paddy State Parks

- Yoga Studios
 - Lila Yoga—State College, PA— lilayogastudios.com
 - PYP Studio—State College, PA—
 - Yoga Lab—State College, PA— statecollegeyogalab.com
- Other
 - Wellness in Motion—State College, PA— wellnessinmotionstudio.com
 - Nittany Valley Running Club - <http://www.nvrun.com/>
 - University Recreation Centers—State College, PA—free to full-time students
 - Many university sporting events are free or discounted for student purchase

Ecology-Related Core Courses: (APPENDIX 1)

Molecular, Physiological, Behavioral, and Evolutionary Ecology

- BIOL 406 Symbiosis (fall & spring)
- BIOL 446 Physiological Ecology (spring)
- ENT 597B Concepts and Techniques in Molecular Ecology
- ENT 597D-Insect Chemical Ecology (fall, even)
- ERM 444 Environmental Biophysics (fall, odd)
- FOR 409 Tree Physiology (spring, odd)
- HORT 445 Plant Ecology (fall)
- HORT/PLBIO 514 Modern Techniques and Concepts in Plant Ecophysiology (spring)
- HORT 517 Ecology of Plant Roots (fall, odd)
- PPEM 440 Environmental Microbiomes: Concepts and Analysis Tools (fall)
- SOILS 512 Environmental Soil Microbiology (spring)

Population and Community Ecology

- AGRO 510 Ecology of Agricultural Systems (spring)
- BIOL 412 Ecology of Infectious Diseases (fall)
- BIOL 482 Coastal Biology (spring)
- BIOL 519 Ecological and Environmental Problem Solving (spring, even)
- ENT 420 Introduction to Population Dynamics (fall, odd)
- FOR 508 Forest Ecology (spring, even)
- WFS 560 Population Estimation and Modeling (fall & spring)

Ecosystem, Landscape and Global Ecology

- ERM 435 / WFS 435 Limnology (fall)
- GEOG 411W Forest Geography (fall, odd)
- GEOG 414 Principles and Applications in Landscape Ecology (fall & spring)
- GEOG 510 Fire, Ecosystems, and People (fall 2017 only)
- GEOG 550 Wetlands Ecology and Management (spring)
- SOILS 571 Ecosystem Nutrient Cycles (fall, even)
- WFS 585 Applied Spatial Ecology (spring)

Statistics: (APPENDIX 2)

Statistics

- ENT 535 Statistical Techniques in Entomology (fall)
- GEOG 464 Advanced Spatial Statistics (spring)
- STAT 502 Analysis of Variance and Design of Experiments (fall & spring)
- STAT 505 Applied Multivariate Statistical Analysis (fall)
- STAT 510 Applied Time Series Analysis (fall)
- STAT 511 Regression Analysis and Modeling (fall)
- STAT 512 Design and Analysis of Experiments (spring)
- WFS 597B Quantitative Methods in Ecology (spring)
- WFS 560 Population Estimation and Modeling (fall & spring)

Additional Courses: (APPENDIX 3)

Agronomy courses

- AGECO 497A (HORT) Principles and Practices of Organic Agriculture (spring, even)
- AGRO 597D World Agroecosystems (fall, odd)
- AGRO 410W Crop Science (spring)
- AGRO 510 Ecology of Agricultural Systems (spring)
- AGRO 518 Response of Plants to Environmental Stress (fall, odd)

Biology courses

- BIOL 406 Symbiosis (spring)
- BIOL 412 Ecology Of Infectious Diseases
- BIOL 414 Taxonomy Of Seed Plants
- BIOL 415 Ecotoxicology
- BIOL 427 (GEOSC) Evolution
- BIOL 428 Population Genetics
- BIOL 429 Animal Behavior
- BIOL 436 Population Ecology And Global Climate Change
- BIOL 446 Physiological Ecology (spring)
- BIOL 450w Experimental Field Biology
- BIOL 463 General Ecology
- BIOL 464 (ANTH) Sociobiology
- BIOL 482 Coastal Biology
- BIOL 499a (IL) Tropical Field Ecology
- BIOL 505 Statistical Methods In Evolutionary Genetics
- BIOL 519 Ecological And Environmental Problem Solving
- BIOL 542 (ENT, W F S) Systematics
- BIOL 545 Ecosystem Dynamics
- BIOL 593 (ANTH;ENT) Tropical Field Studies (Organization For Tropical Studies)

Entomology courses

- ENT 425 Freshwater Entomology
- ENT 497B Insect Biodiversity and Evolution
- ENT 518 Insect Natural History and Field Ecology (fall course taught at end of summer)
- ENT 597B Concepts and Techniques in Molecular Ecology (spring)
- ENT 597D Insect Chemical Ecology

Environmental Resource Management

- ERM 413w Case Studies In Ecosystem Management
- ERM 450 Wetland Conservation (fall)

Forestry courses

- FOR 409 Tree Physiology (spring, odd)
- FOR 421 Silviculture: Applied Forest Ecology (fall)
- FOR 430 (WFS) Conservation Biology (fall)
- FOR 455 Remote Sensing And Spatial Data Handling (fall)
- FOR 466w Forest Resource Management (spring)
- FOR 508 Forest Ecology (spring, even)
- FOR 521 Advanced Silviculture: Managing Forest Ecosystems (spring)

Geography courses

- GEOG 501C Research Perspectives in Human-Environment Geography
- GEOG 509 Population Geography Seminar
- GEOG 510 Tropical Forest Dynamics (spring)

Geoscience courses

- GEOSC 542 Quantitative Methods in Hydrogeology

Horticulture courses

- HORT 402W Plant Nutrition (spring)
- HORT 445: Plant Ecology (fall)
- HORT 514: Modern Techniques and Concepts in Plant Ecophysiology (spring)
- HORT 517: Ecology of Plant Roots (fall, odd)

Meteorology courses

- METEO 563 Bioclimatology

Plant Biology courses

- PLBIO 512 Plant Resource Acquisition And Utilization
- PLBIO 513 Integrative Plant Communication And Growth
- PLBIO 514 (HORT) Modern Techniques And Concepts In Plant Ecophysiology
- PLBIO 515 Modern Techniques And Concepts In Plant Cell Biology
- PLBIO 516 Modern Techniques And Concepts In Plant Molecular Biology

Sociology courses

- SOC 423 Social Demography
- SOC 523 Internal and International Migration

Soils courses

- SOILS 412w Soil Ecology (fall)
- SOILS 415 Soil Mapping And Land Use (fall)
- SOILS 416 Soil Genesis (fall, even years)

- SOILS 512 Environmental Soil Microbiology (spring, odd years)
- SOILS 516 Soil Genesis Field Component; after Spring Semester classes end; 1 week
- SOILS 597c Soil Properties And Functions (fall)

Wildlife and Fisheries Science courses

- WFS 407 Ornithology
- WFS 408 Mammalogy
- WFS 409 Mammalogy Laboratory
- WFS 422 Ecology of Fishes (fall)
- WFS 430 (FOR) Conservation Biology (fall)
- WFS 446 Wildlife And Fisheries Population Dynamics
- WFS 447 Wildlife Management
- WFS 452 Ichthyology
- WFS 453 Ichthyology Laboratory
- WFS 460 Wildlife Behavior (fall)
- WFS 463 Fishery Management
- WFS 536 Freshwater Field Ecology
- WFS 542 Systematics
- WFS 552 Systematics and Evolution of Fishes
- WFS 560 Population Estimation and Modeling

EGSO Officer Positions: (APPENDIX 4)

- **President:** The President of EGSO is responsible for scheduling monthly officer meetings, and creating the agenda for said meetings. One of their biggest responsibilities is to plan recruitment weekend in the spring, which consists of gathering volunteers, planning the welcome dinner, and helping to create recruit schedules. They are required to circulate pertinent information to the student body and oversee all other officer positions.
- **Vice President/Treasurer:** The Vice President/Treasurer is responsible for assisting the president in their duties and shall assume the duties of the president in their absence. They are also responsible for maintaining all financial records, including collections, disbursements of funds and all fundraiser activity. This position is the only member with access to the EGSO Associated Student Activities (ASA) account.
- **Secretary:** The secretary shall be responsible for creating and circulating all correspondence, reports, minutes and announcements generated at each EGSO meeting.
- **Webmaster:** The webmaster is responsible for ensuring that the EGSO webpage is accurate and up to date. This includes, but is not limited to, adding the seminar series and colloquium series schedule, uploading the current issue of "Notes from the Field," and creating an active calendar with upcoming social and academic events.

- **Graduate & Professional Student Association (GPSA) Representative:** The Graduate & Professional Student Association (GPSA) Representative is responsible for attending GPSA meetings (held every two weeks) and reporting any pertinent information back to the EGSO. In addition, they are responsible for conveying any concerns voiced by the EGSO back to GPSA. Although it is not required for the position, GPSA representatives are encouraged to run for a delegate positions in the spring to allow our representative to become a voting member on behalf of EGSO. It is requested that they circulate any pertinent information from GPSA to the greater ecology student body, such as the upcoming elections and graduate student announcements.
- **Social Chair (and Social Co-Chair):** The Social Chair (and Social Co-Chair) are responsible for planning and circulating information about monthly social events which promote interaction and cooperation between ecology graduate students, postdocs and faculty. These monthly social events are typically in the form of happy hours, coffee hours, ice cream social, etc. If desired by fellow EGSO members, they are also responsible for planning a graduate student retreat, which can be anything from a weekend of camping, to a few days in the city.
- **Curriculum Committee Representative:** The Curriculum Committee Representative receives periodic emails about graduate student curriculum changes and is then responsible for translating this information back to the EGSO. They are also responsible for keeping up to date on curriculum requirements and passing any concerns that are voiced by the ecology graduate students, back to the curriculum committee.
- **Program Committee Representative:** The Program Committee Representative is responsible for acting as a liaison between the EGSO and the program committee.
- **Anderson Award Representative:** The Anderson Award Representative is responsible for circulating information regarding the Anderson Award, a travel grant awarded to ecology graduate students who demonstrate excellence in their work. They serve to organize application materials and also assist with the review process and selection of award recipients.