

This is a draft Resource Map for the Earth, Atmospheric, and Planetary Sciences department at Purdue University. This was adapted from the "Sample Ph.D. Mentoring Plan" developed by Vashan Wright (Woods Hole Oceanographic Institution) and Karin Block (City College of New York and CUNY Graduate Center), License: CC BY-NC-SA 4.0. The goal of this document is to outline existing resources within the department, Purdue, and the broader community that exist to support and uplift people of color.

https://www.eaps.purdue.edu/diversity/Purdue EAPS Resources.html

Mentoring Plans

This section describes available tools and resources for establishing mentorship expectations within research groups.

- The College of Science (which includes Biological Sciences, Chemistry, Computer Science, Earth, Atmospheric, and Planetary Sciences, Mathematics, Physics and Astronomy, Statistics) has established templates for <u>Individual Development Plans</u> (IDPs) to be completed by each graduate student within the College, discussed in conjunction with their faculty advisor(s), and maintained in the student's file by the front office. IDPs are designed to provide students a place to establish clear expectations that can be referred to as a guide in later discussions as needed, with places to state both short- and longer-term goals. A more detailed description of the IDP and its expected use can be found here.. The EAPS-specific templates are as follows: Year 1, Year 2, Years.3-5+.
- The College of Science (or possibly the graduate school) has established an additional requirement that each advisor within the department set group expectations for what constitutes acceptable research conduct necessary for a student to receive an 'S' for their research credits each semester/summer.
- Expectations for the timing, structure, and frequency of meetings for the student's
 Advisory Committee can be found in the <u>EAPS Graduate Program Regulations</u>. In brief:
 the AC should have at least three (3) members, one of whom must be either from
 outside the student's specialty area or external to the EAPS Department. The role of the
 AC is up to the student they can be called on for professional support, project
 assistance, time management advice, or other issues as needed, both individually and
 as a unit.
- Resources we want to have:
 - Mentoring plan within a lab group where a list of people can be put together who can be utilized as a resource and lists their expertise that is relevant to your specific research group.

- Mentoring workshops → already in the works
- Means to express expectations for both mentor and mentee.

Core Work Resources

This section describes all core resources available within the department and the university designed to set expectations for behavior, means of reporting misconduct, and resources for travel, presentations and other stuff (FIX).

- Codes of conduct exist for both the university as a whole and the EAPS department. The
 Purdue University code of conduct can be found here. The EAPS departmental code of
 conduct is currently in its first iteration and under review. Once the code is established
 and posted by departmental leadership, it will be attached to this document.
- A flowchart for department members experiencing workplace issues is provided under the graduate student of the website: (https://www.eaps.purdue.edu/for_students/graduate/Graduate%20resources%20flowch art v2.pdf)
- The EAPS Diversity Committee
- Departmental and University-level ombudspeople
- Title IX office and Office of Institutional Equity (OIE)
- Purdue hotline. https://www.purdue.edu/hotline/
 - Reporting concerns anonymously about unethical or illegal behavior including "questionable" behavior from faculty or staff.

Community Support and Mental Health Resources

This section describes available resources within the department, university, and community that can assist new students, postdocs, faculty, and staff in getting connected to Purdue and the broader Lafavette area.

Department Resources

- First-Year Mentorship Program
- Departmental Ombudsperson Program
- EAPS Social Events, including: Fall Festival, events organized by the Social Representatives of the Graduate Student Association
- There exist no specified recommendations for vacation time allotted per year, and no specifications for work hours per week. Advisors may set these on a lab-by-lab basis.
 - Could talk to Dan about a more formalized policy
- Grad student compiled list of resources for healthcare providers in the community

Purdue Resources

- Purdue Counseling and Psychological Services (CAPS)
 - Group therapy and support sessions
 - Psychiatry/medication management
 - Some individual therapy (12 sessions maximum per year)
 - Community referrals for longer-term mental health support
 - WellTrack App
 - Hosts list of <u>online resources</u>

- <u>Purdue Counseling and Guidance Center</u> (PGCG)
 - o Only available when academic term is in session
 - Group and individual sessions available
 - Group counseling for students of color
 - Trans and non-binary support group
 - Seems to be mostly run by graduate students with someone with a certification of some sort in the room
 - Free as far as we know
 - No limit to number of sessions
- LGBTQ+ Center
 - Graduate student support group
 - Purdue employee meetups (grad students included)
- Any type of religious centers?
 - Jewish center, Catholic center, Mosque on campus
- Multicultural Science Programs
- Women in Science Program
- Native American Educational and Cultural Center
- Black Cultural Center
- Latino Cultural Center
 - CAPS Virtual drop-in hours where you can speak to the LCC CAPS liaison. This
 is open to all Purdue University students.
- Asian American and Asian Resource and Cultural Center
- The Wellness Center at the CoRec
 - Massage therapy
 - Nutrition counseling
 - Financial and wellness counseling
- Disability Resource Center
 - The DRC strives to proactively identify and remove barriers to access, promote inclusion and minimize the need for individual accommodations. They provide services, resources, and programs to facilitate equal access for disabled students, resulting in their full participation in curricular and co-curricular offerings.
 - Form to submit an accommodation request
 - o Does this apply when you're doing research credits?
- Graduate parent support network.

https://www.purdue.edu/gradschool/student/families/gpsn.html

- o Organization committed to supporting Purdue's graduate students with families.
- International students and postdocs. https://www.purdue.edu/IPPU/ISS/.
 - ISS seeks to enhance the academic, cultural, and social pursuits of students and scholars from abroad through knowledge and expertise in recruitment, admissions, immigration, and advising.
- English proficiency classes.

https://purdue-place.gosignmeup.com/Public/Course/Browse

- Pronunciation, Public Speaking, Conversation Skills, Academic Writing, Reading Proficiency, American English Vocabulary. Likely free but not sure.
- Grad student center
- Grad student lounge should exist in the department;

Community Opportunities, Lafayette

- Mental health options: Anisa Counseling Group, Modern Mental Health, Harmony Counseling Center, Willowstone Family Services. Full list of CAPS-recommended options here.
- Healthcare service providers: IU Health-Arnett (Primary Care, Women's Health, also has an urgent care center), Franciscan Physician Network Dermatology West Lafayette, Franciscan Health (OBGYN), Comfort Dental of Lafayette, Life Smiles Dentistry

Other Community Opportunities

 National organizations that run conferences, support sessions, etc. include: SACNAS, NABG, AISES

Skillset Support Resources

This section describes available resources for training/development of additional skills typically required or recommended in earth, atmospheric, and planetary science, including field work-related skills and various softwares.

Department Resources

- Remote Sensing (EAPS 577) 3 credits (introduces use of ENVI, IDL, the Planetary Data Science Node)
- Upcoming ArcGIS suite course (Mapping the Planets EAPS 5XX) 3 credits (Introduces use of ArcMap, ArcScene, other ArcGIS products)
- Geologic Field Methods 3 credits (introduction to geologic mapping principles, applications of aerial photography, GPS, and GIS techniques)
- Rocks for Lab Jocks aka Laboratory Analysis of Earth and Planetary Materials (EAPS 591) - 3 credits (Become familiar with common laboratory analytical techniques used in Earth and planetary science)

Purdue Resources

- The <u>Purdue Writing Lab</u> provides consultations for undergraduate and graduate students as well as faculty and staff to provide feedback on all forms of writing, from manuscript drafts to proposals.
- Purdue also offers a series of additional certificates that graduate students can earn over the course of their career. These include:
 - o Online graduate certificate in spatial data science
 - o Computational Interdisciplinary Graduate Programs
 - Teaching theory Certificates
- ITaP offers a wide variety of FAQ pages (and free downloads) for relevant software, including <u>ArcGIS</u> and the <u>Adobe Creative Suite</u>. Purdue also has an ArcGIS <u>online</u> <u>community account</u>, which allows access to all of ESRI's tutorials and additional resources.

- Figure making workshop using Adobe or other open-source versions (GIMP, Inkscape)
- Lisa Nielsen and Lindsey Peabody → helps out with all of the fellowship applications and is just v helpful overall
- CoRec outdoor orientation seminars (are these real? discuss)
- CoRec physical training resources for field work: meet with a trainer to learn exercises that help with range of motion, stamina, lessening fall-risk, general strength during field work
- Several free workshops from matlab programming to debt management. https://gspd.gosignmeup.com/Public/Course/Browse

Community Resources

- NASA JPL's Planetary Science Summer School (PSSS): three-month-long summer course for early career folks in space exploration (postdocs, grad students past candidacy, early career faculty). PSSS is focused on development of a hypothesis-driven planetary science robotic mission in a concurrent engineering environment while getting an in-depth, first-hand look at mission design, life cycle, costs, schedule & the trade-offs inherent in each.
- <u>Isocamp</u>: 2 week Stable Isotope or Isoscape lecture and lab short course now in New Mexico. Open to grad students, postdocs, lab managers, etc.
- South Dakota School of Mines field camps for summer (sign up for classes, paid)
 - https://geologyfieldcamp.sdsmt.edu/
- International Summer School in Glaciology
- Radar Summer School
- GSA Planetary Geology Division's Student Resource Listing, which includes both graduate and undergraduate opportunities, such as REUs, scholarships, internships, and short courses.

Professional Development Resources

This section describes available resources for training/development or best practices in teaching/pedagogy, proposal writing, public speaking, and other relevant opportunities. <u>Department Resources</u>

- The Graduate Student Association elects yearly Professional Development Representatives, who are responsible for running 1-2 professional development opportunities for graduate students. These include brand-building workshops, CV development workshops, and website editing sessions.
- All first year graduate students are required to take EAPS 602, the New Grad Seminar, a
 one-semester course that introduces incoming grad students to proposal writing,
 professional oral and poster presentations, and ADD.
- Weekly departmental seminars with outside speakers offer opportunities for one-on-one and group meetings between graduate students, postdocs, and faculty and the speakers.

Purdue Resources

- Purdue University College Teaching certificates
- ADVANCE Purdue

- An NSF program designed to develop systemic approaches to increase the representation and advancement of women in STEM careers. The three guiding goals are to (1) Increase the number of women of color in STEM tenure-track faculty positions, (2) To improve the success of all women STEM tenure-track faculty, and (3) To engage all faculty in transforming the institution.
- Purdue toastmasters club. https://4685166.toastmastersclubs.org/
 - Weekly meetings to develop speaking and leadership skills.
 - Open to Purdue faculty, postdocs, staff, students, alumni and families.
- Grant writing. https://wiki.itap.purdue.edu/display/FellowshipAndGrantWriting
 - o Templates, guides, workshops, etc.
- Purdue Center for Career Opportunities (CCO). https://www.cco.purdue.edu/
 - Help with interview practice, job search strategies, resume, academic applications, etc.
- Office of Professional Development workshops
 - Everything from machine learning, to cover letters, to healthy habits
- <u>Purdue PostDoc Association</u> networking and webinars
- ImpactX this program was recently opened up to graduate students, but I'm not sure how long that will last
- Purdue Graduate GSA Grants (travel/professional, but also includes others)
- Mentoring program with Honors College?
- Bill Fornes mini MBA
- AGEP peer mentoring program between graduate students (mostly PhD candidates) and undergraduates in stem. Pays grad students ~\$1000/semester. For poc grads.

Community Resources

- AGU <u>Learn and Develop Site</u> Webinars, paths through science, jobs
- AAAS has a wide variety of resources for students, postdocs, and faculty:
 - Individual development plan.
 http://myidp.sciencecareers.org/?AspxAutoDetectCookieSupport=1. Online resource for PhDs and postdocs that helps strategize their next career step.
 - Communication Toolkit to help scientists differentiate from scientific communication and public communication.
 - For more resources. look at the Resources tab on the AAAS website!
- National Center for Faculty Development and Diversity. https://www.facultydiversity.org/
 - Help with planning, improving productivity and reducing stress in order to succeed in academia. This is an awesome site!
- GSA offers some community resources, including a Mentoring365 program and online webinars under <u>Mentor and Network Programs</u>.

Outreach Resources

This section describes opportunities for students, faculty, and others in the department wishing to engage in outreach, mentoring, or other work within Purdue, the community, or more broadly. Department Opportunities

Note: there are no known paid outreach opportunities at the departmental level.

- Steve Smith is the EAPS outreach coordinator.
 - AP Fridays
 - Superheroes of Science
 - Outdoor Rock Garden
 - Middle and High School virtual labs
 (https://www.purdue.edu/science/K12/labs.html?_ga=2.158746620.794693848.1
 618344897-154864062.1604349614)
 - Hosts teaching workshops for greater Lafayette teachers
 - Visits local elementary, middle, and high schools to lead STEM activities
 - Writes grants and asks to include faculty on them (usually in name only)
 - Assists in grad student and faculty's broader impacts statements
- GSA Outreach Committee
 - Passport Day
 - Spring Fest (in conjunction with Steve Smith and university as a whole)
 - Senior Citizen partnership (lecture series at Westminster Village)
 - Homecoming outreach event → EAPS booth
 - Used to do Family Stem Nights with elementary schools (Chris Roemmele)
 - Currently working on creating STEM videos for a virtual Kids STEM Degree program
- Individual grad student outreach
 - Volunteering at local science fairs
 - Brad did a class at a middle school???
 - Guest lectures at Ivy Tech
 - Allison L does things with local girl scout troops
 - GK-12 program (education and outreach?)
 - Geologist Pen Pal → local high schools
- Individual faculty outreach
 - Annual Wabash River Sampling Blitz
 - Rock displays within the department (i.e. meteorite displays)
 - o Lisa Welp is on a Haliburton grant for.....something with Steve
 - Dan Chavas+grad students recently were in an article for outreach

Purdue Opportunities

Note: there are no known paid outreach opportunities at the university level.

- K-12 Outreach at Purdue. https://www.purdue.edu/science/K12/index.html
 - Provide professional development and support for K-12 science and mathematics educators
 - GK-12 program: outreach in a classroom for 1 semester, designing lesson plan about your research at the middle school level
- Office of Engagement and Outreach at Purdue.

https://www.purdue.edu/hhs/hdfs/engagement/index.html

- o Outreach programs for children, families, military, etc.
- SpringFest = Annual Purdue-wide community outreach event (one Saturday every year) → EAPS has a booth

- Office of Engagement grants available (~\$1500 of funding for projects/community members)
- Saturday Morning Astrophysics is run through the Department of Physics and Astronomy, and provides lectures to interested high school and middle school students (with live demonstrations)
- Space Day Ambassadors is an aerospace engineering outreach program that travels to local elementary, middle, and high schools and hosts space science activities
 - Also hosts an annual Space Day Event open to the greater Indiana community
 - o https://engineering.purdue.edu/PurdueSpaceDav/about/index-html

Community Outreach Opportunities

- Letters to a Pre-Scientist
- Outreach fellowships through Indiana Space Grant Consortium (https://insgc.spacegrant.org/funding/insgc-outreach-and-research-projects/)
- Indiana Science Communication Day → run by Notre Dame
- Lunar and Planetary Institute Outreach Workshops
- Guest lectures at Indiana State Museum

LCC Scholarships:

https://www.purdue.edu/lcc/resources/scholarships/index.php

Notes from Faculty Meeting (4/27)

- Goal is to add this to the website so they have access to all the resources, acting as a starting point.
 - Maybe once a year, some group can update it with additional resources/get rid of old links
 - Reporting flowchart link doesn't work everytime
 - have someone designated to update it on a regular basis. Key is to actually identify someone who would update this prior.
 - Newsletter is actually nice now, concise, has some internship/resources/application deadlines. Some of the things we discussed here would live better in a newsletter than a static document that gets updated once a year.
- Graduate student lounge?
 - Not a lot of space in the dept. Right now
 - Nursing lounge not sure what the plans would be if we got it back
 - Idea is that it would become an open area grad student space/work area
- Disability resources?
 - What are the steps for fulfilling accommodation requests in regards to research credits?
 - Faculty don't have a great idea of this
 - How do we go about making this actionable?
 - Reaching out to Dan/DRC
 - See if DRC gets this sort of thing from other depts., if its been clarified
 - Student can choose which faculty the letters get sent to
 - If student specifies this for EAPS 699, advisor will get a letter
- IDP related things
 - Establishing a way to clarify expectations on both sides of the relationship, so that you can see in writing what your PI expects from you and not just the expectations you are setting for yourself, so they can be referenced.
 - Have a discussion with the faculty to remind them what the goals of the IDP are
- As of this semester, you and your advisor have to write down your expectations/goals to decide whether you get an S or U at the end of the semester.
 - This was sent out in an email by the graduate school at the beginning of the semester
 - In faculty's mypurdue, they have to sign off and say yes I have discussed w my student what our written goals are

Next Steps:

- Work on identifying which aspects of this would be better suited for newsletter vs. a document on the website, and who would be best suited to update it before publishing
- Identifying what the accommodation request pathway is for pursuing research credits and general PhD things (quals, defense, etc). Check in with DRC, Nat will bring it up with Dan. Amanda will email
- Having a discussion with the faculty, reinforcing what the goals of the IDP are

Last deliverable

- Working with field committee to develop templates for all the plans we've started outlining (before/during/after)
 - Lots of students do fieldwork without their advisor, so having these resources available not just to faculty but also for graduate students.