NAU SES URGE Pod: Resource Map

This document provides resources and information that may be relevant to new graduate students in SES, including some resources that may be especially useful to students who are Black, Indigenous, or People of Color (BIPOC), or identify with another traditionally underrepresented group in academia or STEM. The document includes resources for: 1) finding communities and support at NAU and in Flagstaff, 2) life in Flagstaff, 3) finding field gear and conducting research, 4) professional development and funding opportunities, 5) outreach activities, 6) conduct and reporting, 7) mental health, and 8) possible mentoring plans to use with an advisor or mentor. This living document can be added to as we become aware of new resources that may be of use to our graduate student community.

Support and Community Resources
For students seeking support from a professional or informal community or affinity group, at NAU or beyond

- **NAU Community resources**:
    - **Native American Cultural Center** at NAU: https://in.nau.edu/native-american-cultural-center/
    - **Many NAU clubs** focused on students from particular backgrounds or with particular interests: https://in.nau.edu/inclusion/clubs/
    - **Safe Working and Learning Environment** / Non-Discrimination and Anti-Harrassment Policy: https://nau.edu/university-policy-library/safe-working-and-learning/
    - **Title IX** Procedures: https://nau.edu/university-policy-library/student-sexual-misconduct/
    - **NAU Equity and Access Office**: https://in.nau.edu/eao/ (928 523-3312; equityandaccess@nau.edu)
    - **Office of the Dean of Students:** https://in.nau.edu/dean-of-students/report-an-incident/
    - **NAU Disability Resources:** https://in.nau.edu/disability-resources (928 523-8773; dr@nau.edu)
    - **Center for University Access and Inclusion** (Diversity Office): https://in.nau.edu/center-for-university-access-and-inclusion/ (928 523-7855; CUAI@nau.edu)
    - **Office of Inclusion Multicultural and LGBTQIA** Student Services: https://in.nau.edu/inclusion (928 523-5656; inclusion@nau.edu)
    - **Cline Library Native American and Indigenous Film Series**: https://www.facebook.com/clinelibraryNAIFS
    - **Institute for Tribal Environmental Professionals** (ITEP) at NAU: http://www7.nau.edu/itep/main/Home/
    - **Research Initiative for Scientific Enhancement** (RISE) - for undergraduate and Masters students who are from traditionally underrepresented groups at NAU: https://nau.edu/cefns/nau-rise/

- **Support organizations and networks** outside of NAU (a non-exhaustive list):
  - **Asian Americans and Pacific Islanders in Geoscience** (AAPIG): https://www.aapigeosci.org/
  - **Association of Filipino Scientists in America** (AFSA): https://www.filipinoscientists.org/
  - **American Indian Science and Engineering Society** (AISES): https://www.aises.org/
  - **Alaska Native Science & Engineering Program** (ANSEP): https://www.ansep.net/about/
  - **Association for Women Geoscientists** (AWG): http://www.awg.org/
  - **Black in Marine Science** (BIMS): https://www.blackinmarinescience.org/
  - **Black in Geoscience**: https://blackingeoscience.org/
  - **Earth Science Mentor Watch**: https://esmentormatch.github.io/index.html
  - **Earth Science Women's Network** (ESWN): https://eswnonline.org/
  - **Future Rock Docs** (A collection of research and career resources for geoscience students): https://www.futurerxdoc.com/
  - **Latinas in Earth & Planetary Sciences** (GeoLatinas): https://geolatinas.weebly.com/
  - **Graduate Women in Stem** (GWIS): https://www.gwis.org/
  - **International Association for Geoscience Diversity** (iAGD): https://theiagd.org/
  - **Minorities in Agriculture, Natural Resources, and Related Sciences** (MANRRS): https://www.manrrs.org/
  - **National Association of Black Geoscientists** (NABG): http://www.nabg-us.org/
  - **Advancing Chicanos/Hispanics & Native Americans in Science** (SACNAS): https://www.sacnas.org/
  - **Strategies for Ecology Education, Diversity, and Sustainability** (SEEDS): https://esa.org/seeds/
  - **Latinxs/Hispanics in Earth and Space Science** (SOLESS): https://ciresdiversity.colorado.edu/soless
  - **Society for Women in Marine Science** (SWMS): https://swmsmarinescience.com/

Flagstaff Resources
For finding your way in Flagstaff

- **Housing Resources**
  - NAU Off-campus housing: https://www.facebook.com/NAU-Off-Campus-Housing-588349224858628/
  - 928 Rentals: http://www.mattbrydenthal.com/
  - Flagstaff Levitan Investment Properties: http://www.flaglips.com/
  - NAU graduate housing listserv: GRADUATE_HOUSING@lists.nau.edu

- **Businesses for the Black community and Black-owned businesses**
  - **Black Barber Shops -** aggregates black barber shops in major cities and towns. The closest major city they list is Phoenix from 2016. http://blackbarber-shop.com/black-barber-shops-in-phoenix-az-complete-list/
  - **Black-owned businesses in Flagstaff**
    - ATL Wings
    - Kuttz Barber Shop
    - Market of Dreams
    - Simply Melanin (Instagram only)

Equipment and Research Resources
To prepare for field work, field trips, or conduct research

- **Outdoor gear and supplies**
  - General tips for getting outdoor gear on a budget: https://juliacisneros.com/2021/02/23/tips-for-getting-outdoor-gear-on-a-budget/
  - Student resources for field work: https://emersonmlynch.weebly.com/resources.html
  - Online places to look for discounts, sales, and used gear for sale:
    - https://www.backcountry.com/
    - https://www.rei.com/rei-garage
    - https://www.sierra.com/gear~d~4868/
  - Local equipment options
    - NAU Outdoor Adventure Co-Op Program: https://in.nau.edu/campusrecreation/outdoor-adventures-co-op/
    - Peace Surplus - NAU students receive a 10% discount upon presenting their ID: https://www.peacesurplus.com/
    - Snow Mountain River: https://snowmountainriver.com/
- **Library**
  - Ways to interact with a NAU librarian
    - Website: https://nau.edu/library
    - Phone number: (928) 523-2173
    - Online Chat: see general website
    - Email: librarians@nau.edu
    - Meet with a librarian program: https://nau.edu/library/contact-your-subject-librarian/
  - Request an item unavailable through normal NAU journal subscriptions: https://illiad.nau.edu/illiad/illiad.dll?Action=10&Form=2&Value=MakeRequest
  - Research and subject guides: https://libraryguides.nau.edu/c.php?g=441739/

Professional Development and Financial Resources
For students seeking professional development opportunities and/or funding

- **Career development resources** at NAU: https://in.nau.edu/career/

- **Professional development and career resources** f**or grad students** including information and/or resources on networking, minimizing stress, finances, resumes and CVs, LinkedIn, and more)

https://nau.edu/graduate-college/professional-development-series/

- **Handshake** is a platform through NAU to connect and find jobs (many on campus): https://in.nau.edu/career/handshake/

- **GeoReading for Equity**: a compilation of readings and resources for people interested in learning about justice, equity, diversity, and inclusion in the geosciences: https://www.georeadingforequity.com/

- **Funding Resources**
  - **Tribal scholarships** for NAU students: https://nau.edu/office-of-scholarships-and-financial-aid/tribal-scholarships/
    - Including the **Quayle scholarship** for graduate students: https://nau.edu/graduate-college/scholarships/
  - **Graduate student scholarships**: https://nau.edu/graduate-college/scholarships/
  - **SES Graduate scholarships**: https://nau.edu/ses/graduate-scholarships-awards/
  - **National and International scholarships**: https://nau.edu/nisf/

Outreach Resources
For graduate students interested in participating in outreach activities

- There are various opportunities for outreach in Flagstaff through the organization **STEM City**: http://www.flagstaffstemcity.com/

- The **Louis Stokes Alliance for Minority Participation** has a program at NAU, and they are often looking for graduate student mentors: https://nau.edu/ses/louis-stokes-award-for-minority-participation-lsamp/

- **Skype a Scientist**: a program that pairs scientists with K-12 classrooms for visits via Skype: https://www.skypeascientist.com/

- **PolarTREC**: a NSF funded intensive collaboration between polar scientists and high school teachers: https://www.polartrec.com/

- **SciComm at NAU**: there is an excellent Graduate Certificate program in Science Communication here at NAU, for those interested in developing these skills. You can complete the full certificate or just take any courses of interest: https://nau.edu/communication/scicomm/

- We hope that the **SES Diversity & Inclusion Committee** will continue to compile other resources and potentially develop new ways for people to be involved in local outreach: https://nau.edu/ses/diversity-and-inclusion/

Conduct and Reporting Resources
For guidelines and reporting in the event of misconduct

- **Code of Conduct**
  - **Reporting policies** are listed in detail in our Code of Conduct document, and are also pasted below for convenience. Eventually the Code of Conduct will be

publicly available online, but is currently under review with NAU Legal and exists in draft form on the NAU SES Diversity & Inclusion Shared Drive.

- **Reporting**
    - **Through the Title IX Office,** to report discrimination or harrassment: https://in.nau.edu/eao/equity-and-access-office-compliant-form/
    - **Through the Office of the Dean of Students:**
        - To report an incident of general misconduct: https://cm.maxient.com/reportingform.php?NorthernAZUniv&layout_id=0
        - To file a CARE report: https://cm.maxient.com/reportingform.php?NorthernAZUniv&layout_id=10
        - To file a report about an off-campus incident: https://cm.maxient.com/reportingform.php?NorthernAZUniv&layout_id=14
        - To file a COVID violation report: https://cm.maxient.com/reportingform.php?NorthernAZUniv&layout_id=15
        - To file a Title IX report: https://cm.maxient.com/reportingform.php?NorthernAZUniv&layout_id=52
        - To submit a campus crime report: https://in.nau.edu/dean-of-students/report-an-incident/
        - To submit an anonymous police report: https://in.nau.edu/police-department/anonymous-report/

Mental Health Resources
For assistance with mental health, at NAU or beyond

- **Counseling Services**: https://in.nau.edu/campus-health-services/nau-counseling-services/ (928 523-2131; campushealth@nau.edu)
- **Employee Assistance and Wellness:** https://in.nau.edu/eaw/ (928 523-1552; ask-eaw@nau.edu)
- **Victim Witness Services** for Coconino County: https://vwscoconino.org/ (928 856-7676)

Mentoring Plans and Procedures
For setting boundaries, guidelines, and expectations with your mentor or advisor

- An example of a **mentoring plan** you and your mentor can sign onto, and use to guide your relationship and expectations (**Appendix A**)
- An example of a **PhD student evaluation sheet** which could be used to set goals, establish norms and expectations, and set the tone for your relationship with an advisor (could be modified for a Masters student) (**Appendix B**)
- Two examples of **rubrics** that could be used to evaluate graduate student performance (as a self evaluation, or by a supervisor) (**Appendix C**)

Appendix A: *Example mentoring plan created and shared by the NAU Department of Astronomy and Planetary Science*

The intent of this document is to determine a set of expectations for the graduate student and advisor to agree upon at the beginning of the degree. These expectations can be revisited, but a starting baseline is crucial.

Graduate Student Mentoring Plan

It is the mission of the [Department Name] at Northern Arizona University to train the next generation of world-leading researchers. One key aspect of this training is through a collaborative advisor-student mentoring system. The department-wide plan given below — and that is co-signed by the student and mentor — identifies core areas of graduate student mentoring and details how students will be trained in these areas.

Research and Project Development: The student and mentor will work collaboratively to sculpt a novel dissertation project for the student. While such topics often develop organically, the mentor will be responsible for using readings, suggested coursework, and discussions to help the student to both articulate new ideas and to build the skills necessary to complete an outlined research project. The student is responsible for contributing the necessary time to develop ideas and a project. As part of these discussions, it is the responsibility of the mentor to help the student understand the necessary steps for completing a proposed project (e.g., identifying requisite laboratory analysis, discussing any new observations that may be required, or outlining numerical analyses that may be needed) and for helping the student to design a reasonable timeline for completing the dissertation project.

Conference and Workshop Attendance: The mentor will work with the student to identify (at least) one academic conference or workshop per year that the student should attend. Attendance is, of course, dependent on sufficient research project progress on behalf of the student and the availability of travel funds. When the mentor cannot provide travel funds, the mentor agrees to help the student identify alternative methods for funding conference attendance (e.g., through travel scholarships). During (or prior to) the conference, the mentor agrees to guide the student through networking experiences and events. The student agrees to appropriately prepare for conference attendance and to behave professionally at such events.

Poster Presentation: On at least one occasion in the tenure of the student at NAU, the mentor will work with the student to discuss and design an effective poster for presentation at an academic conference. This discussion will cover poster layout, length, and appropriate content. The mentor agrees to help the student develop and practice a short oral "elevator pitch" style presentation to accompany the poster. The student agrees to initiate this feedback process at least one month prior to the upcoming presentation.

Oral Presentation: On at least one occasion in the tenure of the student at NAU, the mentor will work with the student to develop an effective oral presentation of the student's work. The target for this presentation may include an academic conference or an internal [Department

Name] seminar. Working with the student, the mentor agrees to discuss presentation design and the effective use of visual aides. The mentor also agrees to provide feedback on at least one practice delivery of the presentation. The student agrees to initiate this feedback process at least one month prior to the upcoming presentation.

Manuscript Submission and Review: The mentor and student will work together to submit at least one student-led manuscript for publication in an appropriate peer-reviewed journal. As part of this process, the mentor will guide the student through the scientific writing process, and will also provide guidance to the student on how to professionally respond to reviewer feedback. The student agrees to accept all responsibilities that come with lead authorship, and also agrees to receive constructive feedback on manuscript drafts from the mentor and co-authors. In the event that a manuscript submission deadline is set, the student agrees to initiate the writing process with sufficient time to meet this deadline and the mentor agrees to provide timely feedback so that the deadline is met.

Proposal Crafting: The mentor (and/or [Department Name]) agrees to provide proposal crafting practice to the student on (at least) one occasion and if requested by the student. This may mean aiding the student in the submission of a fellowship proposal or involving the student in the submission of a larger, mentor-led proposal. The mentor agrees to provide guidance on effective proposal writing practices, and will also help the student to understand related budgeting and administrative processes. For student-led proposals, the student agrees to initiate the writing and feedback process with sufficient time to meet the proposal deadline.

Mentoring: The mentor agrees to provide opportunities for the student to mentor undergraduates through a research project, if such an opportunity is desired. The mentor agrees to regularly oversee interactions between the student and undergraduate researcher. The student agrees to accept the responsibilities that come with being a project mentor, including providing sufficient guidance to the undergraduate to see a project to completion.

Teaching: The mentor and [insert department] agree to provide teaching opportunities to the student (if desired). This may include a department-sponsored teaching assistantship (when such positions are available) or opportunities to deliver guest instruction in an undergraduate-level course. The mentor and department agree to provide sufficient resources to the student for effective lab/course instruction. The student agrees to meet all requirements of a teaching assistant and to deliver all instruction in a professional manner consistent with NAU policies.

Meetings: The mentor and student will meet for a duration of at least one hour every week. The student also agrees to attend any regular research group meetings.

The undersigned are committed to the plan above.

_____   _____   _____
      Student/FI   **Primary Mentor/PI**   **Secondary Mentor (if applicable)**

Appendix B: *PhD Student Self Evaluation*

This is an example of what a new PhD student could fill out and discuss with their advisor/mentor early on in the program. The following self-reflection questions include research interests, work styles, skills/training goals, and expectations. These are important topics to explore and discuss in order to strengthen the working relationship and communication between students and mentors

I. Interests
- What types of research problems interest you?
- What types of analyses do you enjoy doing the most? (e.g., modeling, field work, lab work, interviews)
- What types of analyses do you enjoy doing the least?
- Why do you want a PhD? What do you want to do when you are done?

II. Work style
- How do you like to work on projects? Do you prefer collaborative projects or independent projects?   Do you prefer to work by yourself some of the time, most of the time, all of the time?
- How often do you prefer to meet to talk about your research?   What is your preferred style of meeting (formal, informal, group, individual etc?)
- When working on previous research projects, what were your biggest struggles? What were your biggest strengths?
- How do you approach work that has a deadline? How do you approach work that doesn't have a deadline?

III. Training
- What skills do you want to gain during your PhD? What skills do you need to develop to help you achieve your academic and career goals?
- What sub disciplines do you feel you need the most training in? What kinds of classes would you want to take to fill any educational gaps you feel you might have?
- What experience do you have in writing academic papers? In giving professional presentations as talks and posters? In writing proposals? In which of these areas do you need training?
- What experience do you have in teaching? In scientific communication to non specialists? In what areas do you need training?

IV. Expectations
- What do you view as your responsibilities as a PhD student?   Which of these responsibilities will help you successfully complete your PhD and how? Which of these responsibilities will help you attain your career goals and how?
- What would you like to accomplish by the end of 2019? List 2-4 specific academic goals.
- How much time do you think you will have to dedicate to achieve these goals (hours per week, months per year etc)?

Appendix C: *Example rubrics for graduate student evaluation (self or by a supervisor)*

Example 1: From the SES Graduate Research Assistant Evaluation sheet

SES Graduate Research Assistant Evaluation				
Expectations	**Rating**			
General SES RA Expectations	Exceeds Expectations	Meets Expectations	Does Not Meet Expectations	NA
Fuilled the terms of the GA Contract				
Completed all required trainings				
Was well prepared for research meetings				
Attended and fully participated in all required meetings				
Made appropriate alternative arrangements as necessary due to illness, university business, or other unforseen emergencies.				
Course-Specific Expectations as outlined by supervisor				
Example: Read scientific literature related to thesis project				
Example: Made progress towards projection completion in laboratory				
Example: Grasped of the scope of project				
Example: Participated in group meetings and collaborated with labmaters				

Example 2: from Khan et al. (2012) (https://files.eric.ed.gov/fulltext/EJ1062835.pdf)

UMUC Graduate School Student Learning Expectations (SLEs)

STUDENT LEARNING EXPECTATIONS (SLEs)	
Written Communication (COMM)	Produce writing that meets expectations for format, organization, content, purpose, and audience.
Information Literacy (INFO)	Demonstrate the ability to use libraries and other information resources to effectively locate, select, and evaluate needed information.
Critical Thinking (THIN)	Demonstrate the use of analytical skills and reflective processing of information.
Technology Fluency (TECH)	Demonstrate an understanding of information technology broad enough to apply technology productively to academic studies, work, and everyday life.
Content/Discipline-Specific Knowledge (KNOW)	Demonstrate knowledge and competencies specific to program or major area of study.