

GEO-SCI 705 Geosciences Graduate Research Seminar Spring 2022

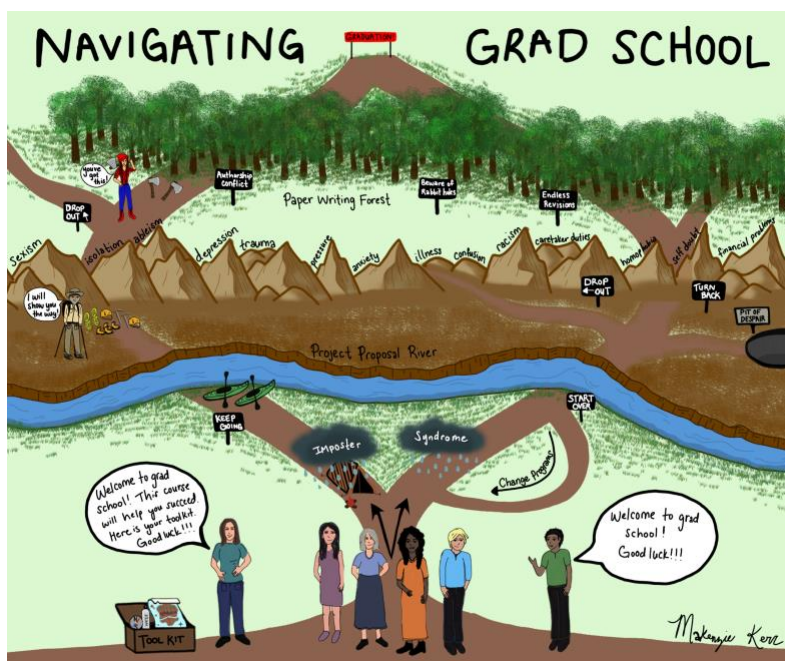
Instructor: Julie Brigham-Grette (247 Morrill Science Center II, juliebg@geo.umass.edu) and TBD

Communication: We will primarily use emails for communication for this course (emailed preferred over phone). You can set up an appointment via email or our appointment scheduling software, show up during our office hours and you are also always welcome to stop by anytime that our doors are open. You can expect a response to your email within 24-48 hours, excluding weekends.

Credits: 1

Pre-requisite: none

This seminar explores the skills, resources and habits that help Geosciences graduate students to succeed in graduate school and in your careers beyond UMass Geosciences. The path through graduate school can be bumpy if you are not prepared for challenges, such as imposter syndrome, advisor-student conflict, research ethics, collaboration tension. Topics may vary by student interest and can include, scientific and professional ethics of geosciences research, networking, resolving conflict, preparing proposals, non-technical skills, job applications.



Learning goals.

- Perform review of papers and proposals

- Assess research proposal landscape and strategies
- Identify potential source of conflict during graduate studies and resources to navigate those conflicts
- Strengthen self-advocacy skills
- Develop a science plan for finishing degree program
- Develop plan for developing non-technical skills (e.g., running meetings)
- Cultivate professional relationships outside of research area
- Write a career development plan
- Collaborate with a cohort of graduate students outside of research group

Meeting time: The seminars meet 3:30-5:00 every other Friday. Students can organize social gatherings for graduate students following the seminars.

There are a few days in the seminar that are designed to be specifically for either MS or PhD students as the material is particularly suited for one of these populations. Most sessions are for both MS and PhD students with the expectation that PhD students might guide some of the discussions and bring their experiences to the conversations.

Moodle: All students have access to the Geosciences graduate student moodle page that hosts a variety of resources. The tab at the bottom of that moodle page lists resources and assignments for this seminar and its companion geosci 703.

Schedule GEO-SCI 705: Geosciences Graduate Research Seminar

date	Group	Topic	Agenda
1	MS + PhD	Research Ethics and responsibilities	Geoethics; responsibilities of geoscientists to tax-payers and to the community, diversity and inclusion.
2	MS + PhD	Reading and reviewing papers	Discuss how to critically read a paper. Discuss different approaches for offering constructive peer review.
3	MS + PhD	How to frame a proposal	Discussion on what makes some proposals more successful than others.
4	MS + PhD	Resources and strategies for thriving in grad school	imposter syndrome; impactful broader impacts, advisor-student conflict; implicit bias, title IX reporting.
5	MS	Getting ready for the next career step	We will talk about what you need to put in place now to get you where you want to be.

6	PhD	Getting ready for academic and non-academic jobs	Networking. Being willing to put yourself out there. These and other skills should be honed early so that you will be noticed after graduation.
7	MS + PhD	Resources & responsibilities	Reference managers, open-source software, social media, office of professional development, science communication training, impactful broader impacts, advisor-student conflict. These things that are not in the core of your research efforts can help you succeed.

Homework

Before meeting 1: Complete the assignment about your concerns and goals for the coming semester. This assignment strengthens self-advocacy skills.

Before meeting 2: Prepare a review of a recently submitted preprint posted on EarthArXiv and bring your questions about the process to the meeting. Strengthens critical reading skills.

Before meeting 3: Read and comment on two readings (Markley 2010 and Oreskes 1994); 2) look through funded NSF proposal summaries in your sub area. What is compelling about those proposals? Strengthens critical reading skills and deepens understanding of proposal landscape

Before meeting 4: Reassess your semester plan. Are you where you want to be? what adjustments do you need to make? What is taking more time than you thought it would? 2) (Re)Take one (or more) of the Harvard implicit bias tests. This assignment strengthens self-advocacy skills.



Before meeting 5 (homework for all even though PhD don't meet): Look around at science careers and find someone whose job you would like to have. What skills do they need to have? Have a conversation with your advisor about the skills that you will develop in your graduate degree. Are you getting opportunities to develop non-technical skills? Would you benefit from an Individual Development Plan? This assignment strengthens self-advocacy skills and strengthens non-technical skills.

Before meeting 6 (homework for all even though MS don't meet): Pick a non-faculty university employee that can help you in your degree. Start to cultivate a relationship with this person - it could be a front office clerk, machinist, web developer, diversity officer, grad school staff, custodians etc. Not only will you learn from them useful information about the university, you may better appreciate the many roles within the industry of academia. This assignment cultivates professional relationships outside of research group.

Before meeting 7: Make a plan for the remainder of your degree program that includes science goals (e.g. submit paper) and also personal goals (e.g. get experience running a meeting). Include in this plan specific milestones that can serve as times to celebrate. This assignment strengthens self-advocacy skills.

Grading Basis: The letter grade earned by students as follows:

To earn an 'A', students should 1) attend all meetings, 2) frequently contribute questions and ideas to the discussion, and 3) complete with all homework assignments with demonstrated application of learned strategies. The research proposal will be judged not on the proposed research but on writing quality and satisfying the provided requirements (e.g. formatting, address prompts).

To earn a 'B', students should 1) attend all meetings, 2) often contribute to questions and ideas to the discussion and 3) submit all assignments and demonstrate application of learned strategies for most assignments.

To earn a 'C', students should 1) attend all meetings, 2) occasionally contribute question and ideas to the discussion and 3) submit all assignments but without demonstrated application of strategies learned in the seminar.

Make-up Policy: Students who are absent due to excusable extenuating circumstances remain responsible for meeting all class requirements and contacting me in a timely fashion about making up missed work. I will offer such students reasonable assistance in making up missed classes.

Academic Honesty Statement: Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication,

plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent.

(http://www.umass.edu/dean_students/codeofconduct/acadhonesty/).

Statement of access and inclusion: The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. Regardless of whether you have consulted with disability services or not, please let me know if you have concerns about participating in this seminar or have comments on how it may be better organized for your learning. We are living in challenging times. Let's take each week at a time and offer each other grace and patience.