

CSM 501: Graduate Student Skills and Success Section B - Fall 2022

Instructors: Dr. Tim Barbari (tbarbari@mines.edu) and Dr. Jenny Briggs (jsbriggs@mines.edu)

Course Materials: All the necessary materials for the course will be provided on Canvas.

Class Period: M 3:30-4:50 McNeil Hall 214

Credit: 1, pass/fail

Additional Resources for Future Reference:

- Brown, S., McDowell, L., & Race, P. (2013). 500 tips for research students. Routledge.
- Friedland, A. J., Folt, C. L., & Mercer, J. L. (2018). Writing successful science proposals. Yale University Press.
- Snieder, R., & Larner, K. (2009). The art of being a scientist: A guide for graduate students and their mentors. Cambridge University Press.
- Stone, D., Patton, B., & Heen, S. (2010). Difficult conversations: How to discuss what matters most. Penguin.

Office Hours: By appointment

Course description: This course is a collaborative learning program focused on the skills that will allow you as a new graduate student to develop to your fullest potential and efficiency at Mines, prepare you for the next steps in your professional or academic journey, and help you build a network of colleagues across campus. The course is designed for new students pursuing any type of graduate degree in all departments and programs at Mines.

Course Objectives: Develop skills for success in independent and collaborative research; understand the expectations for graduate (vs. undergraduate) training; become an integrated member of the Mines community; explore resources and support for academic and professional growth; connect with peers across campus; and develop as a person, a student, and an early-career STEM specialist.

Credit: To achieve a passing grade in this course; participants are expected to attend all sessions unless excused prior to class; prepare fully; participate actively in small-group or individual exercises; contribute to class discussions and online assignments; and demonstrate the principles of respect, inclusion, and academic integrity outlined below. Feedback is essential for improvement, and assignments and activities throughout the course will prompt critical feedback from instructors and peers. Each week you will be asked to reflect on the material covered, both before and after class. This work will be compiled, with any other weekly deliverables, into a final “self-guide to success at Mines” that you’ll submit at the end of the semester (but is really for you!), and that we’ll reflect on as a group in the final week. In general, the pass/fail assessment will focus on effort and engagement.

Respect: Our classroom is a learning community where actions and words are expected to be mutually respectful (faculty to student, student to student, and student to faculty). Please don’t be disruptive during class. This includes turning off cell phones, arriving to class on time, and respecting the contribution and perspective of each participant.

Academic integrity: Mines looks to be free of any and all forms of academic misconduct and expects students to act with integrity at all times. In this class this means do not use your colleague’s work as your own. The complete policy is here: <https://catalog.mines.edu/policiesandprocedures/>.

Disability Support: Mines is committed to ensuring the full participation of all students in its programs, including students with disabilities. If you are registered with Disability Support Services (DSS) and we have received your letter of accommodations, please contact me so we can discuss your needs in this course.

Absence policy for CSM 501: If you need to miss class for a pressing academic, professional and/or personal reason, please email me with the subject line CSM501 Absence Week of #X and a brief statement of the reason. This will help me plan my evaluations effectively. Please complete the short prep assignment and review the class materials posted in Canvas for that week. Complete the reflections based on your prep work and materials reviewed.

Notes and other posted materials: The syllabus is subject to change, and you are responsible for keeping up with changes to the syllabus as they are announced in class.

Schedule:

Week	Date	Topic
1	Aug 22	Welcome to campus, the transition to graduate school, and articulating goals: Transitioning to the expectations of graduate school. How do your past undergrad, professional, and/or prior MS experiences apply/translate? How is now different? How will multiple roles (e.g., RA, TA, intern, student) be defined and balanced? What do you hope to accomplish at Mines?
2	Aug 29	TA'ing effectively and proactively: How to get the most out of your experience (and to help the students and faculty get the most out of you for the least amount of time); best practices in teaching, learning, and assessment; attending to student psychological and emotional factors.
3	Sept 5	<i>Labor Day Holiday – take some time to relax!</i>
4	Sept 12	Project design for research and practice: What goes into a project? Dealing with ambiguity, uncertainty, and constraints; drafting and revising proposals or plans. Exercise: Collaborative project execution
5	Sept 19	Scientific communication 1: Persuading your audience / justifying project support: Applying for and justifying funding, including fellowships / scholarships, industry projects, angel investors, etc. Elements of effective, compelling proposals and pitches. Recognizing expectations and tailoring scope, tone, style, and content (e.g., academic vs. industry)
6	Sept 26	Finding, evaluating, and organizing resources for your literature review: Defining the process; finding and evaluating scholarly and authoritative resources; using citation management software to organize sources.
7	Oct 3	Intercultural aspects of collaborative research: Handling cultural differences in perspectives and behavior; cultural competence as it relates to issues of bias and microaggressions; supporting your classmates: allyship; campus resources
8	Oct 10	Difficult conversations and avoiding roadblocks: How to explore and conduct difficult conversations. Where to get help when you need it? Opportunities for professional growth
9	Oct 17	<i>Fall Break—enjoy!</i>
10	Oct 24	Responsible conduct of science: Conducting responsible research; meeting mandated requirements; research misconduct vs. questionable research practices
11	Oct 31	Building thriving relationships at Mines: Working with your advisor and other mentors: establishing expectations; mentoring other students: establishing

		expectations, identifying goals, providing resources, giving feedback. How to build peer relationships and set boundaries.
12	Nov 7	Scientific communication 2: Oral and poster presentations: The “and →but →therefore” storyline. Examples of effective and ineffective presentations. Campus opportunities: GRADS, 3MT, departmental seminar series: attend!
13	Nov 14	The sustainable student: Setting goals on different timescales; learning when, and how, to say “no”. Practicing self-care.
14	Nov 21	Scientific communication 3: Writing and publishing for different audiences: Tips for writing, tailoring for specific audiences and outlets (course assignments, academic journals, agency or technical reports, theses, industry publications, etc.) Capturing and communicating data; interpretation of results relative to original hypotheses/objectives; drawing and supporting conclusions appropriately.
15	Nov 28	Translating your research for broader impact: Identifying problems worth solving; using your research to address practical problems in industry, government, and society. Sharing your research potential in a compelling way to 1) grantors/program managers in marketability/ commercialization sections of funding applications (e.g., NSF, STTRs, SBIRs), or 2) angel investors to raise seed/early-stage funding.
16	Dec 5	Identifying and preparing for your next steps: Discussion of first week assignments: sharing resource lists and extracurricular activities/campus events. Moving forward: Marketing yourself effectively: websites and social media; how to find and apply for jobs, internships, or further degree programs; preparing yourself and your resume/CV for each interview