Course description: This seminar will build skills for writing scientific proposals and facilitate investigation of career pathways. Topics covered include scientific writing and graphics, proposal writing for grants and fellowships, and exploration of academic and non-academic careers.

Instructor:
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Questions: Email or drop by my office
Logistics

Course Webpage
http://www.mit.edu/~pog/proposals_pathways.html

Class time
Thursday 3-4.30pm

Classroom
54-517

Prerequisites
None
Topics

1. **Scientific writing and graphics**: brainstorming, literary versus scientific writing, effective paragraphs and sentences, graphical excellence, data-ink maximization, editing and finishing up, ethics including self plagiarism

2. **Proposal writing**: Overview of funding landscape, how to write for proposal reviewers, common mistakes, maximizing programmatic relevance, title and project summary, scientific objectives, background, research plan, budget and overhead

3. **Exploration of academic and non-academic careers**: students interview 1-2 professionals working in careers they are interested in (e.g., academia, industry, national lab) and report their findings in a written summary and presentation to class.
Structure and assessment

Structure:

- Readings are given out each class for the following week
- Class time is used for a discussion of the reading (lead by one of the students in the class) followed by an activity
- Career exploration involves doing 1-2 interviews throughout the semester, writing up a summary (~2 pages per interview), and presenting outcome to the class at the end of semester (10 mins)

Grading:
P/D/F assessed based on reading the readings, participation in class and presentation and write-up of career interviews. Each reading will be accompanied by a quick (1-2 question) online quiz to be answered before class.
Schedule

Classes
• No class on Nov 22nd (Thanksgiving)

Projects
• Presentations of career exploration interviews will be in the last two classes on Nov 29th and Dec 6th
• We will discuss plans for interviews in class on Oct 4th
References

Schultz, Eloquent science, AMS Books, 2009 (available to download through MIT libraries)
References

Tufte, The visual display of quantitative information, 2nd edition
References

The grant application writer’s workbook, NSF Fastlane Version
References

Feibelman, A PhD is not enough, Basic Books
Plan for the remainder of this class

1. Describe current career interests and plans

2. Who to interview for career exploration

3. Brainstorm questions for interviews

4. Introduce reading for next week and select discussion leader
Chapter 6 from “A PhD is not enough” by Feibelman:

From Here to Tenure: Choosing a Career Path

An unsentimental comparison of the merits of jobs in academia, industry, and in government laboratories.

Discussion leader?
Chapter 6 from “A PhD is not enough” by Feibelman:

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