Ethical & Professional Science
Instructors: Cathy and Steve Constable
SIOG 232: 2 units, spring quarter class
https://canvas.ucsd.edu/courses/56288
Meets 2-3:20pm Tuesdays Eckart 227

This class will meet once each week to review professional behavior in the physical sciences, ethics, authorships, preparing proposals, public speaking, university-industry relationships, applying for jobs, etc. Students will receive lectures, carry out assigned reading, participate in class discussions, and learn how to formulate an "elevator pitch". Grading will be S/U and judged by attendance (no more than 2 missed classes), participation, and by their elevator pitch. It is intended that this class will meet the National Science Foundation's implementation of Section 7009 of the COMPETES Act and its amended form (outlined at https://www.nsf.gov/od/recr.jsp) for training in responsible and ethical conduct of research (RCR) and UCSD's requirements of RCR training for students and postdocs. Other options for acquiring this training include SIOB 273, Professional Ethics in Science, and the Scientific Ethics course given by UCSD's Research Ethics Program.

In the first class be prepared to quickly introduce yourself with name, curricular group, advisor, and research area in a one-liner (think of this as a plainspoken thesis title: if you had one sentence to explain your research, what would you say?).

Proposed Schedule

April 2: Class introductions; goals, expectations, professional societies; need for trust in science; Fabrication, Falsification & Plagiarism and the people who engage in it.

April 9: The slippery slope of QRP (Questionable Research Practices); Concept of GeoEthics and field ethics; Examples from UCSD research integrity & enforcement.

April 16: Science communication — writing, open access, open science.

April 23: Sharing results: Authorship. CRediT roles. Citation metrics and journal impact factors.

April 30: Reviewing papers; bullying and bias in peer review; chatGPT, other evolving trends, Elsevier and AI.

May 7: University-industry relationships; consulting, patents, conflict of interest and conflict of commitment; export control.

May 14: Writing proposals (including thesis proposals); Applying for jobs and fellowships; Non-academic career options.

May 21: Mentoring, research groups and collaborations; Workplace harassment and the importance of bystander intervention; Diversity in Academia.

May 28: Science in Society; Advocacy versus activism; Public speaking.

June 4: Elevator Pitches.