A Proposal for Professional Development at Carnegie Mellon College of Science

Fall: Science Communication

1. Introduction to Presentation

Series overview, organizing and structuring information for clarity and logic.

2. Graphic Design: Clear Thinking Made Visible

Creating and revising persuasive graphics for figures, slides, and posters.
Analysis of the structure of visual argument.

3. Vocal Delivery

Exercises to develop awareness of speed, volume, clarity, verbal tics.
Understanding anxiety and performance.

4. Practice and Feedback

Peer review, instructor feedback.

5. Telling Science Stories

Crafting narrative, navigating detail, public communication, distilling your message.

6. Crafting Explanations

Analysis and construction of explanatory metaphors.

7. Practice and Feedback: video review

Filmed practice with peer review, instructor feedback.

8. Distilling Your Message

Elevator pitch, 3-minute thesis, finding your message.

Meetings are every other week for 1.5 hours. Workshops are self-contained with post-summary handouts and evaluation.

Spring: Scientific Writing

1. Developing an Effective Writing Process

Dispelling misconceptions, best practices for writing, giving feedback, and revision.

2. Understanding Reader Expectation

Learn where readers expect information and how structure affects emphasis.

3. Anatomy of an Abstract

Analyzing the structure and rhetorical moves of an abstract, practice revision.

4. Grant Proposals

How readers find the information they need to advocate for your work.

5. Applying for an NSF-GRFP

Generating an original idea, intellectual merit, broader impacts, personal statements.

6. Graphic Design: Clear Thinking Made Visible

Creating and revising persuasive graphics for figures, slides, and posters.

7. Practice and Feedback

Facilitated peer review of journal articles, proposals, NSF-GRFP.

8. Coherence and Cohesion

Logical flow through linguistic cues that signal emphasis, transition, cause and effect.

Summer: Professional Development

1. Career Options Within and Beyond Academia

Developing an Individual Development Plan (IDP), informational interviews.

2. Networking

Proper etiquette to build, maintain, and make requests from a network.

3. Writing a Resume

Analyzing job postings, crafting a targeted resume and CV.

4. But I Have No skills!

Reframing how you talk about your work, preparing for an interview.