# 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 Academia**
   Making an Individual Development Plan (IDP), how and why to post-doc, getting tenure.

2. **Beyond Academia**
   Informational interviews, how to transition, what's out there.

3. **My Heart is in the Network**
   Proper etiquette to build, maintain, and make requests from a network.

4. **Writing a Resume**
   Analyzing job postings, crafting a targeted resume and CV.

5. **But I Have No skills!**
   Reframing how you talk about your work, preparing for an interview.