Scientific Writing:  
An Intellectual Journey

Course Mechanics
Office hours: During Class time on off-weeks and by appointment

SciComm Schedule

- Meeting dates vary! Mark your calendars.
- YOU MUST ATTEND EACH MEETING, AND ARRIVE ON TIME.

- Six Meetings seven parts of a research paper:
  - Introduction  Meeting 1
  - Methods  Meeting 2
  - Tables and Figures  Meeting 4
  - Results  Meeting 3
  - Discussion/Conclusion  Meeting 5
  - Title and Abstract  Meeting 6
What are Off-Weeks?

- Off-weeks are weeks when SciCom does NOT meet.
- **Each new section of your long-term project is due during class time on the off-week.**
  1. Bring a **hard copy** of each new section to my office and
  2. Send an **electronic copy** to a peer assigned by me.

- **Feedback** from me and from your peers is due at the very **next class meeting (on-week).**

Class Methods

- **In-class exercises**
  - Brief oral presentations
  - Brief writing exercises
  - **Out-of-class exercises**
  - Writing exercises that put biweekly course content to work
  - Peer feedback

- **Long-term projects**
  - One of six choices
  - Produced in increments corresponding to the topic of each meeting and subject to revision.
Grading

- In-class exercises = 20 potential points
- Out-of-class exercises = 30 potential points
- Long-term project = 50 potential points

- + Thoroughly superior work. A model of good scientific writing (rarely used).
- √+ Good work. Requires only minor improvements in any of the following areas: organization of ideas, economy of expression, diction (word choice), grammar, punctuation, spelling.
- √ Acceptable work. Requires moderate revision.
- √- Acceptable but rough work. Requires substantial revision in all areas.
- - Unacceptable work (rarely used).

Rewrites

- ONE rewrite allowed for each assignment.

- Rewrites must be turned in by ONE week after assignment is returned.

- HIGHER grade of the two is recorded.
Please…

• IDENTIFY YOUR SECTION (A, B, or E) ON EACH EMAIL AND HARD COPY.

• Indicate in the upper right hand corner of every hard copy document you turn in:
  – Name
  – Section
  – Exercise
  – Date

• DOUBLE SPACE ALL WORK DOUBLE SPACE ALL WORK

• I will NOT accept single spaced documents

• Save all hard copies with my handwritten comments - I may ask for it all at the end of the term.

What’s an Introduction?
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• A method to **familiarize and orient**.

• The content of an introduction **depends on:**
  – **Its purpose, and**
  – **The audience.**

• Today’s in class exercise demonstrates how content changes depending on the audience.
What’s the Purpose of an Introduction in Scientific Writing?

- Provide the **context** of your work (create your research space, define gap in knowledge).

- State your **focus** (**hypothesis, question**).

- Provide **justification** for your work (how your work can answer the question).

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**Context, Focus, Justification**

- **Context**: Orient your reader to the published literature related to the study you are presenting.

- **Focus**: What question are you addressing? What is your hypothesis. Define your research space, stake out territory.

- **Justification**: Show how your work fits into and extends previous work.

- *This sets up the direction you’ll take in the Discussion Section.*
Macrostructure of a Research Article

- Hourglass diagram of Hill et al.
- **Introduction** provides general field or context.
- **Methods** follows a particularized path.
- **Discussion** moves from specific findings to wider implications.

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What are Some Common Pitfalls of an Introduction Section?

- Including **unnecessary background** or being repetitive.

- **Exaggerating** (or understating) the importance of your work.

- Using **lackluster** openers and **weak** follow-through in the body of your introduction.

- Including **new results** in the introduction section.

- **Improper tense** (Introduction is largely present tense).
Other Models for Introductions

- Problem/Solution.
- Stake out territory, stake out niche, occupy niche.
- All models share a direct approach. Don’t hide your main point or save it until the end of the paper.

An Example from the NEJM

Today’s In-Class Exercises

• Copy the brief biographical sketch you created on the discussion board into a text document.

• Use your text editor to write two more brief biographical sketches (about 100 words each) for a foreign relative and a potential summer employer. Print this document and turn it in to me before you leave today.

Today’s Out-of-Class Exercises

• **Paraphrase in plain language** (suitable for a high school senior) the **introduction** to the NEJM article by Brian Druker.

• Four students will prepare an **oral presentation** on this article for our next class meeting:
  – Summarize the article
  – Identify content, justification, and focus
  – Identify pitfalls
  – Prepare two to three open-ended questions for group discussion

• Write the **introduction to your long-term project** and provide copies of your draft to me (hard copy) and to an assigned peer reviewer by the next off-week.
Peer Review in 7.02 SciComm

Step 1
By the end of class meeting time on the off week, post your long-term project component to the SciComm discussion board:

- Topics are listed for each long-term project component.
- Post your draft as a file attached to a reply to the topic. **Note: Your reply must contain some text in order for you to attach a file.**
- If you write your draft in StarOffice, save it in Word or RTF format.

Peer Review in 7.02 SciComm

Step 2
By the time of your next SciComm class meeting, you will need to download a peer’s draft and post your response as an attached file or reply:

- The peer to whom you should respond will change for each long-term project component and will be indicated under that component’s topic.
- Your feedback should be based upon the goals and pitfalls for that component described in SciComm lecture.
- Use Word’s track changes feature or other means to respond to your peer’s draft.