1 Jan 31  Course Introduction; Science News Minute Examples (what, why, and how?); Structure of a scientific paper; Critical reading of a scientific paper (Hypothesis)

2 Feb 7  Science News “Elevator” Minute (3 min max), Scientific paper vs. proposal structure, How to pick a proposal topic; Peer review; Three Possible Proposal Topics Due

3 Feb 14 Science News Minute; Discussion of Proposal Background, Objectives and Hypotheses, Draft of Objectives & Hypotheses Due

4 Feb 21 Science News Minute; Using the web; Giving a talk

5 Feb 28 Science News Minute, Discussion of Proposal Research Approach section, Proposal Background, Objectives and Hypotheses Due (students will review 2 BOH)

6 Mar 07 Science News Minute; Reviews Due, Seminar Paper Due, Seminar discussion (Seminar: Peter Petraitis)

7 Mar 14 Science News Minute, Seminar Paper Due, Seminar discussion (Seminar: Arnoldo Valle Levinson)

Mar 21 SPRING BREAK

8 Mar 28 Science News Minute, Seminar Paper Due, Seminar discussion (Seminar: David Hutchins) Proposal Research Approach Due

9 April 4  Science News Minute, Responsible Conduct in Research

10 Apr 11 Science News Minute, Seminar Paper Due, Seminar discussion (Seminar: David McGee)

11 Apr 18 Science News Minute, Responsible Conduct in Research; Proposal Draft Due (students will review 2 proposals)

12 Apr 25 Student Proposal Presentations (open to SoMAS public), Proposal Reviews (2) Due

13 May 02 Science News Minute, Responsible Conduct in Research

14 May 09 Science News Minute, Responsible Conduct in Research, Final Proposal Due
DEFINITIONS

Science News “Minute”: 1 or 2 students per week will give a 3-minute presentation of a science news story of the week (e.g., From NY Times Science News, Nature or Science magazines, or other news sources). This will require research beyond what is in the article if it is from the newspaper or a science blog. An alarm will go off at 3 minutes; if the speaker has not finished before this, they have 20 seconds to make a concluding remark.

Most Common Errors (MCE) – pointing out a few common errors in student writing

Proposal: This will be a 10-page document (double-spaced) with an Introduction (~1), Background (~3), Objectives & Hypotheses (~2), and Research Approach (~4). Detailed analytical methods and budget are not required. Students will be required to review another student’s proposal, and also to give a brief presentation (5 min) of their proposal to the class.

Reviewing: Students will review 2 other students’ objectives and hypotheses. They will also review 2 other students’ proposal.

Seminar Paper – A 1-page description of the hypotheses presented in 1 of the papers by the speaker-to-be. How did they test the hypotheses and what were the results of the testing? Students leading a particular discussion do not have to turn in a paper for that one.

Seminar Discussion – 4-5 students will summarize each paper, ask pertinent questions and lead discussion. The presentation will be 15-20 minutes with more time for discussion.

Responsible Conduct in Research – Federally mandated discussion of ethical scientific conduct.

GRADING

Grading will be based on:

Science Minute (5%),

Seminar Papers (3 at 5% each)

Proposal BOH (10%)

BOH Reviews (2 at 5% each)

Proposal PR (15%)
Proposal Oral Presentation (10%)

Final Proposal (15%)

Proposal Reviews (2 at 5% each)

Class Participation & Discussion (10%)

LEARNING OBJECTIVES

Students will learn to:

Construct hypotheses and approaches to test them

Write a scientific proposal

Evaluate proposals as a peer reviewer

Critically read papers from the primary scientific literature

Give interesting, informative, and concise oral scientific presentations

Identify irresponsible conduct of scientific research and respond appropriately

COURSE CONTENT:
Course material accessed from Blackboard, SB Connect, SB Capture or a Stony Brook Course website is for the exclusive use of students who are currently enrolled in the course. Content from these systems cannot be reused or distributed without written permission of the instructor and/or the copyright holder.

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If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services (631) 632-6748 or http://studentaffairs.stonybrook.edu/dss/. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.
Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: http://www.stonybrook.edu/ehs/fire/disabilities

ACADEMIC INTEGRITY STATEMENT:
Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instance of academic dishonesty to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/uaa/academicjudiciary/

CRITICAL INCIDENT MANAGEMENT:
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, and/or inhibits students' ability to learn.