

# Bemidji State University

## BIOL 3337: Science Communication

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This online course includes training in the skills, tools, and habits of mind of the practicing scientist. These skills include navigating and understanding the scientific literature, framing evidence-based and model-driven scientific questions, proposing and testing hypotheses, conducting research responsibly and ethically, analyzing and visualizing data, and communicating scientific rationale and results in lab meetings, presentations, research funding applications, and job searches.

**B. COURSE EFFECTIVE DATES:** 08/21/2017 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Who Are We, What is Science, and Why and How is it Communicated?
2. The Responsible Conduct of Research
3. Statistics and Data Visualization
4. Written and Oral Communications

### D. LEARNING OUTCOMES (General)

1. assess the ways in which the practice of science is both dependent and independent of the society in which it functions, and recognize instances where the scientific enterprise can recapitulate institutional and cultural biases despite the appearance of objectivity.
2. create clear, parsimonious, and rigorous data visualizations, and critically analyze published data visualizations from a variety of sources.
3. create compelling written and oral communications with clearly defined goals and appropriately scaled information content and complexity.
4. critique and improve their own and others' work effectively and generously.
5. find, organize, analyze, annotate, and cite a variety of scientific and mass media sources clearly, concisely, and logically.
6. summarize and practice the norms and requirements for the responsible conduct of research.
7. understand different models of scientific thinking and their strengths and limitations, and apply them to propose testable scientific hypotheses to extend existing knowledge.
8. use features of Microsoft Office and other software to increase productivity and efficiency, and improve document style, consistency, readability, and navigation.

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted