

Term Information

Effective Term Autumn 2018

General Information

Course Bulletin Listing/Subject Area Earth Sciences
Fiscal Unit/Academic Org School of Earth Sciences - D0656
College/Academic Group Arts and Sciences
Level/Career Graduate
Course Number/Catalog 8870
Course Title Proposal Writing and Scientific Communication in Earth Science Is Your Job
Transcript Abbreviation Sci Communication
Course Description Development of scientific communication skills including writing of publications and proposals, oral and poster presentations, and research ethics.
Semester Credit Hours/Units Fixed: 2

Offering Information

Length Of Course 14 Week, 12 Week, 8 Week, 7 Week, 6 Week, 4 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Letter Grade
Repeatable No
Course Components Seminar
Grade Roster Component Seminar
Credit Available by Exam No
Admission Condition Course No
Off Campus Never
Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites Graduate standing in Earth Sciences or Geodetic Sciences or by permission of the instructor
Exclusions
Electronically Enforced No

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 40.0601
Subsidy Level Doctoral Course
Intended Rank Masters, Doctoral

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Discuss and practice scientific writing and the presentation of ideas and data in the earth sciences with an emphasis on developing hypothesis driven science, and clearly communicating hypothesis testing in the context of proposal writing.

Content Topic List

- Scientific Communications: What do you want to be? Why Bother? Developing “the craft” Job Application
 - Basics – Audience, Language
 - Basics – Reading – Writing
 - Discuss Articles, What Makes a Good One?
 - Telling a Story – Structure
 - Hypothesis/Questions
 - Methods
 - Presenting Data & Results
 - Discussion Section
 - References/Citations; Graphics
 - Look at Successful Proposals
 - Speaking; What have you learned from attending seminars?
 - Posters; What have you learned from posters?
 - Research Ethics
- No

Sought Concurrence

Attachments

- Earth science 8870 SyllabusLyons.pdf: syllabus

(Syllabus. Owner: Panero,Wendy R)

Comments

- This has been offered been offered informally to students for several years. It is time to formalize the offering into a course and give students credit. (by Panero,Wendy R on 01/30/2018 10:02 AM)

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Panero,Wendy R	01/30/2018 10:02 AM	Submitted for Approval
Approved	Panero,Wendy R	01/30/2018 10:03 AM	Unit Approval
Approved	Haddad,Deborah Moore	02/04/2018 01:36 PM	College Approval
Pending Approval	Nolen,Dawn Vankeerbergen,Bernadette Chantal Oldroyd,Shelby Quinn Hanlin,Deborah Kay Jenkins,Mary Ellen Bigler	02/04/2018 01:36 PM	ASCCAO Approval

ES 8870
Proposal Writing and Scientific Communication in Earth Science Is Your Job

Fall 2018

2 Credits

Meeting times - to be determined

Instructor: W Berry Lyons
ML 367B

lyons.142@osu.edu
8-3241

<u>Week</u>	<u>Topic</u>	<u>Assignment</u>
1	Scientific Communications: Why Bother? Developing “the craft” Job Application	What do you want to be?
2	Basics – Audience, Language	Previous Research
3	Basics – Reading – Writing	Current Research
4	Discuss Articles, What Makes a Good One?	Critique
5	Telling a Story – Structure	Current Research Revisited
6	Hypothesis/Questions	What are your questions?
7	Methods	How will you answer them?
8	Presenting Data & Results	Talking About Your Data
9	Discussion Section	Revise
10	References/Citations	Graphics
11	Look at Successful Proposals	Putting it all together
12	Speaking; What have you learned from 8898?	Conclusions
13	Posters; What have you learned from posters?	Broader Impacts
14	Research Ethics	Data Management

This course is designed for graduate students within the School of Earth Sciences; others (grad students outside SES and SES senior undergraduates) will be considered but need the permission of the instructor prior to enrollment. Source material: I will use many, including information from various journals in handouts. I will draw a lot from Joshua’s Schimel’s *Writing Science*, 2012, Oxford University Press. There are other sources that have useful content, including: Schultz (2009); Whalen (2007) and Alley (1996) among others and even more recent ones, like

Heard's *The Scientist's Guide to Writing*, 2016. *Science*, *Nature* and *C&E News* have "Career" articles most weeks. We will read, discuss and write. The course will meet for two 55 minute time slots per week. One of those will be spent discussing the readings and/or assignments, the other will be spent in small groups in order to critique each other's writing. The expectation is that you will spend 4 hours outside of class reading and writing. Your writing assignments will be provided to others in your group prior to the in class discussion session. The class grade will be based on writing assignments and class participation.

Outcomes and Expectations The course will discuss and practice scientific writing and the presentation of ideas and data in the earth sciences. The emphasis will be on developing hypothesis driven science, and clearly communicating ways to test hypotheses in the context of proposal writing. The course will also discuss scientific presentation, both orally and using posters, focusing on the presentation of data, as well as ideas. There will be a week dealing with scientific ethics, especially plagiarism, data management, and authorship issues.

Course Goals include developing better communication skills particularly as they pertain to proposal and publication writing.

Course Components: The students will have writing assignments every week. Portions of one of the hour sessions will be spent in small sub-groups critiquing search others writings. assignments will be due 2-3 days prior to the critiquing sessions so both the instructor and the students have time to read and critique others' work. There will be one writing assignment every week. There will be no final exam. Instead a short proposal will be a final project for each student. The proposal will be built from rewriting accumulated assignments through the semester.

STUDENTS WITH DISABILITIES

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs.

Office for Disability Services 098 Baker Hall, 113 W 12th Ave, telephone 292-3307777, TDD 292-0901; <http://www.ods.ohio-state.edu/>

Policy on Religious Holidays: The University recognizes/observes holidays as listed on <http://controller.osu.edu/pay/pay-holidays.shtm>. If you observe any other religious holidays,

please make special arrangements in person with the instructor within the first two weeks of class.