

GC 695G Global Change Toolkit Course

Spring 2013 (1 unit) Tuesdays 11:00 am - 1:00 pm

Bryant Bannister Tree-Ring Building room 424

COURSE DESCRIPTION:

This is a 1 unit colloquium designed specifically for graduate students in the Global Change GIDP PhD Minor, although students in any global-change related discipline may enroll. The course's focus is the acquisition of a basic "Global Change Toolkit," i.e., the foundational background, vocabulary, and communication skills necessary for successful engagement in advanced interdisciplinary scholarly research on global change issues.

COURSE OBJECTIVES:

- To understand the vision and program logistics of the Global Change Ph.D. Minor GIDP
- To review and explore the major themes and initiatives in global change research
- To identify and interact with global change researchers on campus and beyond
- To develop professional skills for communicating global change research across disciplines
- To assemble a personal "toolkit" of global change terms, references, resources, contacts, and skills tailored to your global change research area and future professional goals

INSTRUCTOR FOR 2013:

Dr. Katie Hirschboeck Chair, Global Change GIDP

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Office Hour: Wednesdays 1:30 - 2:30 pm or by email appointment

TEXTS & READINGS:

Climate Literacy: The Essential Principles of Climate Sciences (2009) from the U.S. Global Change Research Program / U.S. Climate Change Science Program

Climate Science Basics - Module 1 of *Climate Insights 101*, an online tutorial from the Pacific Institute for Climate Solutions.

On Being a Scientist: Responsible Conduct in Research (3rd edition) National Academy of Sciences (2009)

Selected readings from the Assessment Reports and Special Reports of The Intergovernmental Panel on Climate Change (IPCC) & relevant scholarly journals

GRADING CRITERIA: To be explained in class *[NOTE: Information contained in the course syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.]*

OTHER COURSE GUIDELINES & POLICIES

Attendance: Required.** If unavoidable problems require you to miss a class, arrangements can be made to make-up one absence.

Academic Integrity: A synopsis of the University of Arizona's Code of Academic Integrity can be found at: <http://deanofstudents.arizona.edu/codeofacademicintegrity>
You are to know it, understand it, and adhere to it.

Contacting me: Office Hours on Wednesdays 1:30 - 2:30 pm or by email appointment

TENTATIVE CLASS SCHEDULE

Session	Date	Topic
1	Jan 22	Introductions and overview
2	Jan 29	Global Change & Climate Science Literacy
3	Feb 5	Historical development of global change science in the context of the history & philosophy of science
4	Feb 12	Global change science "in practice," research integrity and responsible conduct
5	Feb 19	Global Change at the University of Arizona: history and current profile
6	Feb 26	Global Change terms, jargon, & nuances: physical and biological sciences; social and integrative sciences; toolkit brainstorming
7	Mar 5	The future of global change research: defining gaps in current knowledge; critical new areas of research
Final Session	TBD	Capstone end-of-the-semester session plus a light dinner

** Absences pre-approved by the UA Dean of Students (or designee) will be honored. All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion.

ASSIGNMENT FOR SESSION #2: [To be prepared for sharing in class on Jan 29th.]

TOPIC: Global Change & Climate Science Literacy

1. Definitions of "Global Change"

(a) Collect various definitions of global change in the scientific literature and online (4.g., 4 or 5 definitions). As you collect these, in addition to the standard and widely quoted definitions, see if you can uncover a few with a unique or especially interesting perspective.

(b) Find one or more examples of how the term "Global Change" is used in **your own major/discipline(s)**.

(c) Write your OWN definition of global change.

(d) Be prepared to share all of the above in class and discuss whether common threads, concepts, or themes seem to emerge.

2. **READ:** Climate Literacy: The Essential Principles of Climate Sciences U.S. Global Change Research Program / U.S. Climate Change Science Program (2009)

Come to class ready to discuss your thoughts and critiques on this document: Is it a good summary? Is it missing some essential aspects of Climate Science? In what ways do Climate Science Literacy and Global Change intersect, overlap, complement each other, etc.?