

★ **GC 170A1-Lec 003 + 004 INTRODUCTION TO GLOBAL CHANGE – Fall 2013** ★

Time / Place: Tue & Thu 3:30 pm – 4:45 pm in BioWest room 301

The complete SYLLABUS is at: www.ltrr.arizona.edu/kkh/natsgc/syllabus.htm

COURSE DESCRIPTION -- Introduction to Global Change presents the basics of physical science within the context of global environmental changes (climatic change, global warming, ozone depletion, deforestation, etc.) that impact Earth and its inhabitants. The course involves hands-on activities, discussions, online work & interactive learning teams.

PROFESSOR -- Dr. Katie Hirschboeck (*Laboratory of Tree-Ring Research*) Email: katie@LTRR.arizona.edu
Phone: 621-6466 **Office:** Bannister Tree-Ring Building, **room 319** (*a map to my office is on the class webpage*)
Office hrs: see info on “Teaching Team” part of Class Webpage & by appointment (*arrange time in advance via email*)

GRADUATE TEACHING ASSISTANTS See the webpage under Teaching Teams for the GTA office hours & location

- Kit O’Connor – (Natural Resources) oconnorc@email.arizona.edu
- Adriana Zuniga – (Arid Lands) aazuniga@email.arizona.edu
- Saeahm Kim (Hydrology & Water Resources) saeahmk@email.arizona.edu
- Scott Jones – (Arid Lands) scottajones@email.arizona.edu

TEXTBOOKS (*Both are REQUIRED*) – **Electronic Text: The Science of Global Change, An Introduction + Dire Predictions, Understanding Global Warming** - Available for purchase in ASUA bookstore as a package

CLASS NOTES (*REQUIRED*) -- Includes notes for each class period and supplementary info. Will be available in the ASUA bookstore the week after Labor Day. *The PDF version of CLASS NOTES is also linked in D2L.*

TURNING TECHNOLOGIES RESPONSE CARD (“clicker”) or a RESPONSEWARE LICENSE (*REQUIRED*) – This class uses “clickers” or equivalent response devices in the classroom. You will need to bring your clicker or a ResponseWare device (laptop, smartphone, or tablet, to each class. Details are posted on the class webpage under Quick Links and in D2L. You will also need regular internet access to complete online assignments and keep up with the course.

Code of Academic Integrity & GC 170A1 Course Policies: The UA Code of Academic Integrity can be found at: <http://deanofstudents.arizona.edu/codeofacademicintegrity> **You are responsible for knowing it, understanding it, and adhering to it!** NO exceptions! In addition to the Code, you are responsible for knowing and adhering to all **GC 170A Course Policies** as specified in the **Course FAQ** at: <http://www.ltrr.arizona.edu/kkh/natsgc/faq.htm>

Honors Credit is available for this course in Sec 002H by being a preceptor for the class. Contact Dr. H for more details. **Undergraduate Preceptorships** are available -- see our class webpage under **Teaching Team** for details.

GRADING CRITERIA Your final **LETTER GRADE** will be based on the % earned of **1000 possible points** in the class, distributed as follows. The letter grade cutoffs are: A (90-100%), B (80-89%), C (70-79%), D (60-69%), E (<60%)

	<u>GRADED ACTIVITIES</u>	Individual pts	Group pts
	Weekly online Readiness Quizzes 9 @ 10pts, (+ 2 "practice" quizzes)	90	--
	In-Class Tests 4 @ 40 pts (individual) and @10 pts (group)	160	40
	Midterm Exam (200 pts)	200	--
	Final Exam (205 pts)	205	--
	Group Assignments (in-class) <i>variable pts</i>	--	60
	Individual Short Writing Assignments (~5 @ <i>variable pts</i>)	125	--
	Linking-to-Life Term Project	100	
	Participation (“clicker points” & class contribution)	20	--
	Occasional Bonus points	<i>(extra)</i>	<i>(extra)</i>
	TOTAL POINTS (% POSSIBLE out of 1000)	900 (90%) (100 (10%)

Students with Disabilities: If you anticipate issues related to the format or requirements of this course, *please meet with Dr H as soon as possible and no later than Sep 13th* so that we can discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Resources (drc.arizona.edu) and notify Dr. H of your eligibility for reasonable accommodations.

★ GC 170A1 Sec 003 + 004 SEMESTER-ON-A-PAGE – FALL 2013 ★

NOTE: This schedule may need to be revised as the semester progresses – updates will be posted online

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
AUGUST	AUG 25	26 <i>First day of classes</i>	27 #1 – Global Change: Science + Issues / Overview RQ-A available	28	29 #2 – On Science & Being a Scientist RQ-B available	30	31
	SEP 1	2 <i>Labor Day - no classes</i>	3 #3 – Quantifying Global Change	4	5 #4 – Energy & Matter Overview RQ-1 CUTOFF	7	4
SEPTEMBER	8	9	10 #5 – Electromagnetic Radiation & Spectrum	11	12 #6 – The Radiation Laws - I RQ-2 CUTOFF	13	14
	15	16	17 #6 – The Radiation Laws - II	18	19 TEST #1	20 <i>Last day to drop via w/o a grade</i>	21
	22	23	24 #7 Atmo Structure & Chemical Composition - I RQ-3 CUTOFF	25	26 #7 - Atmo Structure & Chemical Composition -II	27	28
OCTOBER	29	30	OCT 1 #8– Laws of Thermodynamics & Motion I RQ-4 CUTOFF	2	3 #8 – Laws of Thermodynamics & Motion II	4	5
	6	7	8 TEST #2	9	10 #9 – Intro to Tree Rings & Dendrochronology	11	12
	13	14	15 #9 In-Class Tree-Ring Assignment	16	17 MIDTERM EXAM	18 <i>Last day to drop a class with grade of W</i>	19
	20	21	22 #10 – The Global Energy Balance	23	24 #11 – Systems & Feedbacks RQ-5 CUTOFF	25	26
NOVEMBER	27	28	29 #12 – How Climate Works	30	31 #13 – Natural Climatic Forcing -I RQ-6 CUTOFF	NOV 1	2
	3	4	5 #13 Natural Climatic Forcing-II	6	7 TEST #3	8	9
	10	11	12 #14 – Ozone Depletion in the Stratosphere - I RQ-7 CUTOFF	13	14 #14 – Ozone Depletion in the Stratosphere - II	15	16
	17	18	19 #15 – Global Warming & Anthropogenic Forcing - I RQ-8 CUTOFF	20	21 #15 – Global Warming & Anthropogenic Forcing - II	22	23
	24	25	26 #16 –Climate Change: Impacts & Issues - I	27	Thanksgiving	29 Break	30
	DEC 1	2	3 #16 –Climate Change: Impacts & Issues - II	4	5 TEST #4	6	7
DECEMBER	8	9	10 Global Change Wrap-Up & Climate Science Literacy RQ-9 CUTOFF	11 <i>Last day of classes</i>		13	14
	15	16 FINAL EXAM Sec 3+4 <i>no early exams given!</i>	17 !	18	19	20 <i>Finals End</i>	21 <i>Semester Ends</i>

Online Self Test & Readiness Quiz (RQ) Topics

** NOTE: RQ A + RQ B are practice quizzes*

- RQ-A – Syllabus & FAQ *
- RQ-B – Global Change Overview *
- RQ 1 – Energy & Matter
- RQ 2 – Electromagnetic Spectrum
- RQ 3 – Atmo Structure & Composition

- RQ 4 – Laws of Thermodynamics & Motion
- RQ 5 – Systems & Feedbacks
- RQ 6 – Natural Climatic Processes & Forcing
- RQ 7 – Ozone Depletion
- RQ 8 – Global Warming
- RQ 9 – Global Change Recap

check off the RQs as you complete them – CUTOFF DATES are listed in calendar above