

# ☀ GC 170A1-Lec 001+002 INTRODUCTION TO GLOBAL CHANGE - Fall 2014 ☀

*Time / Place:* Tue & Thu 12:30 pm – 1:45 pm in BioWest room 301

The complete SYLLABUS is at: [www.ltrr.arizona.edu/kkh/natsgc/syllabus.htm](http://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](mailto: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  
**Scott Jones** – (Arid Lands) [scottajones@email.arizona.edu](mailto:scottajones@email.arizona.edu) Office hrs Tu & Th 11:00 am - noon  
**Diana Zamora-Reyes** (Hydrology) [dzamorareyes@email.arizona.edu](mailto:dzamorareyes@email.arizona.edu) Office hrs Mon & Wed 1:30 --- 2:30 pm

**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.

**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%)

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

# PLANNED GC 170A1 SEMESTER-ON-A-PAGE – FALL 2014

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

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>AUGUST</b>	AUG 24	25 <i>First day of classes</i>	<b>26</b> #1 –Overview + Science <b>RQ-A</b>	27	<b>28</b> #2 – Quantifying Global Change <b>RQ-B</b>	29	30
		SEP 1 <i>Labor Day - no classes</i>	<b>2</b> #3 – Quantifying Global Change II	3 <i>Change of Schedule Form needed to ADD</i>	<b>4</b> #3 – Energy & Matter Overview <b>RQ-1 CUTOFF</b>	5	6
<b>SEPTEMBER</b>	7	8	<b>9</b> #4 – Electromagnetic Radiation	10	<b>11</b> #5 – The Radiation Laws - I <b>RQ-2 CUTOFF</b>	12	13
	14	15	<b>16</b> <b>TEST #1</b>	17	<b>18</b> #5 – The Radiation Laws - II	19	20
	21 <i>Last day to drop via UAccess w/o grade of W or E on transcript</i>	22	<b>23</b> #6 Atmo Structure & Chemical Composition - I <b>RQ-3 CUTOFF</b>	24	<b>25</b> #6 - Atmo Structure & Chemical Composition - II	26	27
	28	29	<b>30</b> #7 – Thermodynamics & Energy Transformations - I <b>RQ-4 CUTOFF</b>	OCT 1	<b>2</b> #7 – Thermodynamic & Energy Transformations - II	3	4
<b>OCTOBER</b>	5	6	<b>7</b> <b>TEST #2</b>	8	<b>9</b> #8 – The Global Energy Balance - I	10	11 Family Weekend
	12	13	<b>14</b> #8 – The Global Energy Balance - II	15	<b>16</b> <b>MIDTERM EXAM</b>	17 <i>Last day for registration changes w/o Dean's signature</i>	18
	19	20	<b>21</b> #9 – Systems & Feedbacks <b>RQ-5 CUTOFF</b>	22	<b>23</b> #10 – How Climate Works - I	24	25
	26	27	<b>28</b> #10 – How Climate Works - II <b>RQ-6 CUTOFF</b>	29	<b>30</b> #11 Natural Climatic Forcing	31	NOV 1
	2	3	<b>4</b> <b>TEST #3</b>	5	<b>6</b> #12 – Ozone Depletion - I <b>RQ-7 CUTOFF</b>	7	8
	9	10	<b>11</b> <i>Veteran's Day - no classes</i>	12	<b>13</b> #12 – Ozone Depletion - II	14	15
	16	17	<b>18</b> #13 – Global Warming & Anthropogenic Forcing - I <b>RQ-8 CUTOFF</b>	19	<b>20</b> #13 – Global Warming & Anthropogenic Forcing - II	21	22
	23	24	<b>25</b> <b>TEST #4</b>	26	27 <i>Thanksgiving</i>	28 <i>Break</i>	29
<b>NOVEMBER</b>	30	DEC 1	<b>2</b> #14 – Climate Change: Impacts & Choices - I	3	<b>4</b> #14 – Climate Change: Impacts & Choices - II	5	6
	7	8	<b>9</b> Global Change Wrap-Up <b>RQ-9 CUTOFF</b>	10 <i>Last day of classes</i>	11 <i>Reading Day</i>	12 <i>Finals Begin</i>	13
	14	15	16	17	18 <b>FINAL EXAM</b> 10:30 am - 12:30 pm	19	20 <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 – Thermodynamics & Laws of 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