

Syllabus for UGS303: Sustaining a Planet, Fall 2008

For the most up to date information, visit the course web site: <http://www.geo.utexas.edu/courses/302P/>

Meeting Times: MWF 11-noon, Geo 2.324, plus one 1.5-hr discussion section, Geo 2.308

Instructors: David Allen allen@che.utexas.edu (DA), Jay Banner banner@mail.utexas.edu (JB)

Office Hours: David Allen: 10-11 MWF in CPE 3.462 on DA lecture days and by appointment; Jay Banner: M 1:30-3:00; W 2:30-3:30 in JGB 5.210 on JB lecture days and by appointment.

Teaching Assistants: Carson Werner (carson@mail.utexas.edu), Kelly Hereid (hereidk@mail.utexas.edu), Jeff Paine (jpaine@che.utexas.edu), Blair Stanley (blairchild@mail.utexas.edu)

Readings: Readings will be on either Blackboard or on library reserve and/or the website and announced in class.

Class Policies & Requirements:

- Bring two index cards to class each day, these should be 3x5", blank on one side, lined on the other
- Attendance is required, both in lecture and discussion section
- No laptops or other portable electronic devices; turn off your phone. If you need to come late or leave early, contact your instructor prior to class. If you arrive late, enter through the rear doors outside the building.

Lecture notes: Lecture notes and readings can be found on Blackboard (<http://courses.utexas.edu>).

Course Schedule

Date	Topic #	Topic	Instructor*
Section 1: Introduction, concepts and tools			
Aug. 27	1	Problems facing Planet Earth and modern society; course logistics	DA, JB
Aug. 29	2	Signature Course concept; Expectations for Discussion Section; The concept of Sustainability: Social equity, economy, and environment	DA, JB
Sept. 1		Labor Day Holiday - No class	
Sept. 3	3	The Scientific Method	JB
Sept. 5	4	Tragedy of the Commons I: The history of civilizations and sustainability	JB
Sept. 8	4	Tragedy of the Commons II	JB
Section 2: Natural cycles: How the Earth works			
Sept. 10	5	Plate tectonics and the rock cycle	JB
Sept. 12	6	Atmosphere I: Structure and composition	DA
Sept. 15	7	Atmosphere II: Circulation	JB
Sept. 17	7	Atmosphere III: Weather and climate	JB
Sept. 19	8	Climate change through time	JB
Sept. 22	9	Hydrosphere and the water cycle	JB
Sept. 24	10	Exam I	
Sept. 26	11	Grand Cycles and the Anthropocene	DA
Sept. 29	12	Hydrosphere and the oceans: Structure, composition and circulation	JB
Oct. 1	12	Ocean-atmosphere interactions	JB
Oct. 3	13	Cycles of life - Introduction	DA
Oct. 6	13	Cycles of life - Carbon	DA
Section 3: Human perturbation of natural cycles and sustainability			
Oct. 8	14	Cycles of life – Nitrogen	DA
Oct. 10	15	Human Impact on the water cycle	JB

Oct. 13	16	Sustainability of Freshwater Resources -1	JB
Oct. 15	16	Sustainability of Freshwater Resources -2	JB
Oct. 17	17	Sustainability of the Oceans	JB
Oct. 20		Exam II	
Oct. 22	18	Energy I	DA
Oct. 24	18	Energy II	DA
Oct. 27	19	Energy III	MW
Oct. 29	20	Human impact on the atmosphere I	DA
Oct. 31	20	Human impact on the atmosphere II	DA

Section 4: Societies, economies, technologies, ecologies, and paths to sustainable solutions

Nov. 3	20	Human impact on the atmosphere II (cont'd)	DA
Nov. 5	21	Green Products	DA
Nov. 7	22	Sustainability and social equity	SD
Nov. 10	23	Industrial ecology I	DA
Nov. 12	23	Industrial ecology II	DA
Nov. 14		Exam III	
Nov. 17	24	Environmental change and biodiversity	CP
Nov. 19	25	Environment, science and the media	JB
Nov. 21	26	Sustainable development of cities	SM
Nov. 24		Environmental Music Symposium	
Nov. 26	27	Environmental Change, Policy and Society I	DA
Nov. 28		Thanksgiving Holiday	JB, DA
Dec. 1	27	Environmental Change, Policy and Society II	JB
Dec. 3	27	Environmental Change, Policy and Society III	JB
Dec. 5		Final thoughts and final exam review	DA, JB
Dec. 16		Final exam	

* Denotes Instructor or Guest Speaker. DA - David Allen,; JB - Jay Banner; MW – Michael Webber, School of Engineering; SD - Sarah Dooling, School of Architecture; CP - Camille Parmesan, School of Biological Sciences, SM - Steven Moore, School of Architecture.

Grading: Attendance in lectures and discussion section is required. Three Lecture Exams (45% of total grade) + comprehensive Final Exam (15 %) + Engagement (5%) + Homework (17 %) + Portfolio (18%) = 100 %. There are no make-up exams given. If you miss an exam and do not present a valid documented excuse within 24 hours, your grade for that exam will be zero. If you miss a lecture exam and present a valid excuse within 24 hours, then the lowest grade of your other two exams will substitute for the missing score. Only one missed exam can be substituted for in this manner. If there are special extenuating circumstances presented within 24 hours, alternatives to this policy will be considered. Extra credit opportunities will be described on the course web site. There will be a group extra credit exercise in class that can result in positive or negative points to your grade, depending on the group dynamics of the class. Falsification of attendance records, cheating, and plagiarism are three forms of academic dishonesty. All forms of academic dishonesty will be dealt with seriously. See class website for policies on academic dishonesty, students with disabilities, information on instructors, etc.

The University Honor Code: "The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community."

Religious Holidays: A student who misses classes or other required activities, including examinations, for the observance of a religious holy day should inform the instructor as far in advance of the absence as possible, so that arrangements can be made to complete an assignment within a reasonable time after the absence.