Global Change (Syllabus)

GEOS 478 (undergraduate); Sections 001 (in-person) & 002 (online)
GEOS/ECOL/HNRS/RNR/GEOG/GC 578 (graduate)

On Zoom (812 2511 XXXX/passwd); Tues/Thurs 9:30-10:45am
In-person Gould-Simpson 213 and Live on Zoom: Tues and Thurs 9:30-10:45am
Recorded Lectures (on D2L, Panopto): Available Tues/Thurs @ ~1pm

Notice: This class is taught in-person and online, both synchronous and asynchronous formats. We prefer synchronous participation (in the classroom or live Zoom) for all students (required for graduate students) who can attend the lectures in real time (live or Zoom) – participating in the show is part of the fun. All undergraduate students, however, can participate live or remotely, synchronously or asynchronously, as needed. All material, assignments, exams and opportunities are identical which ever format you choose, although there are a few differences for undergrad presentation times between the in person (001) and online (002) sections.

Description of Course

This class offers an interdisciplinary introduction to the principles of climate, ecosystems, and biogeochemistry needed to understand human impacts on the natural environment. We will also discuss global change prediction and the scientific bases for global change assessments and policy measures. This course is aimed at beginning graduate students pursuing global change research and at undergraduates who are well-grounded in a scientific discipline and are potentially interested in an environmental career or graduate education in a global-change related field. Students in social and policy sciences and other fields who have had a year of natural science coursework (beyond the NATS level) are welcome! Key topics are the physical climate system and its variability, the carbon cycle and related biogeochemistry and ecosystem and ecological processes, land use change, the interactions among climate, ecosystems, and biogeochemistry, and the impact of global change on society. Common threads in all of these topics will pervade the whole semester; these include the use of observations and models, the consideration of multiple scales of change (temporal and spatial), the interaction of human behaviors and choices with natural systems, and the linkages among aspects of global change science.

Course Prerequisites

This class has no specific prerequisites, but we strongly recommend that you have had at least a year of upper division (not NATS) science. You will occasionally be required to set up and solve quantitative problem sets for homework (algebra, not calculus) and to critically read and evaluate original scientific research papers. If you have never taken upper division science classes, or if you are strongly averse to math, you may have difficulty with these assignments.

Instructors and Contact Information

Prof. Scott Saleska, Department of Ecology and Evolutionary Biology (EEB)
BSW-510, saleska@arizona.edu, Office hours: In-person and Online – see D2L
Prof. Joellen Russell, Department of Geosciences
GS-309, jrussell@arizona.edu, Office hours: Tues, 12:15-1:00p, ENR2 Slot Canyon
Teaching Assistant: TBA, TBA@arizona.edu

Class Website: https://d2l.arizona.edu/d2l/home/1638460 (D2L)

Land Acknowledgement

We respectfully acknowledge the University of Arizona is on the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with Tucson being home to the O'odham and the Yaqui. Committed to diversity and inclusion, the University strives to build sustainable relationships with sovereign Native Nations and Indigenous communities through education offerings, partnerships, and community service. (UA Land Acknowledgment)

Course Objectives and Expected Learning Outcomes

This class aims to provide the interdisciplinary scientific principles of global change that are important for policy and assessments, including analysis of scientific literature and data. By the end of this class, you should have a critical understanding of basic global change principles in physical climate, biogeochemical cycles, and global change impacts (i.e. you should be able to review a scientific paper or talk critically) and you should be able to assess a global change-related topic or policy in the context of multiple disciplines. You should be able to address HOW we know, as well as WHAT we know about global environmental change. Undergraduates will be assessed on their presentation skills on a scientific topic, and graduates on their ability to convey and present original scientific research (written and oral) and to efficiently summarize their own research (both written and oral). In-class exercises will engage students with oral and written responses to prompts related to global change science.

This class fills a requirement for undergraduate students in the Earth Systems track of the Geosciences major and for PhD students in the Global Change interdisciplinary minor.

Course Format and Teaching Methods

This course is taught both synchronously and asynchronously. Material is delivered in lectures as powerpoint presentations, through assigned readings, and through class discussion. We encourage outside reading as well as peer-to-peer activities and communication outside the classroom.

In addition, during Lectures we will be using a free web-based participation program called Slido (http://www.slido.com) that allows both question and answer as well as polling.

- **Synchronous: We will meet on Tuesday and Thursday in person (GS-213) and live-online through Zoom from 9:30-10:45a (Tucson time)** to deliver lecture material.
    - We strongly prefer that all graduate students (enrolled in the 578-level sections) participate synchronously whenever possible.
    - We prefer the undergraduates to participate synchronously as well, but we do offer an on-line section (002), so we understand that this may not be possible for all students
- **Asynchronous: Lectures are recorded** and made available through D2L for asynchronous viewing.
- **"Attendance"** is recorded for all students (synchronous or asynchronous) by completing a short review quiz on D2L **prior to the next lecture**.
    - **Classroom/Synchronous attendance is *preferred*, but entirely optional:**
        - Attend if you can, but if you feel sick, stay home.
        - If illness will cause you to miss the equivalent of more than one week of class, you should contact the Dean of Students Office DOS-deanofstudents@email.arizona.edu to share documentation about the challenges you are facing.

Technology Needs/Requirements

Please inform us of any technology issues that may impede your participation in the course as early in the semester as possible. These could include slow internet speed (so as not to be able to access class material synchronously) and lack of computing equipment/accessories. See information at this link: https://it.arizona.edu/student-resources. See UA Wifi description: https://it.arizona.edu/service/uawifi.

In addition, the Office of Student Computing Resources (OSCR, https://it.arizona.edu/oscr/home) provides equipment as needed or can point you to in-person computing resources. You will need to have an up-to-date browser, operating system and some additional software on your computer to take this class. Some material will be delivered as word documents, powerpoint files and/or PDF files: the software is freely available to all UA students at http://softwarelicense.arizona.edu/students.

Absence and Class Participation Policy

We expect you to "attend" class; exams may cover material not explicitly laid out in the lecture slides. Part of your grade (10%) is based on class participation and attendance; this includes regular participation in discussions and peer evaluations (as appropriate). We will also have in-class/on-line activities throughout the semester that require turning in written material; these will help us form the basis for your participation grade. These points are not automatic, so come to class and be ready to talk

in discussions.

- The UA's policies concerning Class Attendance & Participation and Change of Schedule (Add/Drop) are linked here.
- The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, http://policy.arizona.edu/human-resources/religious-accommodation-policy.
- Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: https://deanofstudents.arizona.edu/policies/attendance-policies-and-practices.

Makeup Policy for Students Who Register Late

Our standard "late assignments" policies apply.

Course Communications

Most course communication will occur through D2L and/or your UofA email. Reading assignments are listed on the schedule and/or will be provided as the semester proceeds. Assignments will be posted online. Lecture slides and lecture podcasts will be available online at the class D2L website.

Class schedule: A daily schedule is available on D2L: although subject to change by a day here or there, it's a reasonable representation of the topics and assignments and their timing.

Required Text

There is **no textbook** for this class. Readings will be posted and/or linked through D2L in the Announcements or under the Content section

Scheduled Topics/Activities

See the Schedule on D2L under Content

Graded Work

Homework & Assignments (25% of your grade): For undergraduates, we will give four (4) SHORT homework assignments over the semester. Homework will be due one week from when they are assigned. For graduate students, we require that you complete the first undergrad homework, plus 2 more in-depth problem sets/assignments on specific topics, usually assigned 2 weeks in advance. *We do not accept late assignments - unless you have made prior arrangements with one of the instructors for extenuating circumstances.* If you know you will be away for a given period of time in which an assignment is due, please see one of us in advance - we will be happy to work with you to find a way to meet your obligations.

Graduate discussion (part of your class participation): On the days scheduled for undergraduate presentations (see below), graduate students will meet separately for a discussion of current scientific research topics. We will assign background and discussion readings in advance, and we will ask you to come prepared with a one-page writeup of the papers under consideration (ungraded). If you have ideas for particular topics/papers you'd like us to cover, please email the instructors.

Exams (30% of your grade): Three exams are scheduled – the third is during finals week. Exams together are worth 30% of your grade. These are typically in short answer and essay form, with the possibility of simple calculations (multiply or divide by 2 or 10, no calculator necessary). Exams are not cumulative; each covers material since the last exam. However, there are common threads that run throughout the semester (notably climate and the carbon cycle) and later exams will draw on some of the material presented in the earlier parts of the class, to the extent that it is important for that exam period.

Undergraduate Presentations (20% of your grade – UG only):

All Sections (001 & 002)

Research an aspect of global change in more depth and communicate that effectively to your fellow students and to instructors in a 10 min presentation w/ questions. Presentations will be researched and presented by pairs of undergraduates. The overall exercise counts for 20% of your total grade.

Presentations will take place on 4 separate days throughout the semester and each date covers a different set of topics:

- Oct XX Topics: Physical Climate or Energy/Consumption/Population
- Oct XX Topics: Terrestrial Ecosystems, Ecology and/or Biogeochemistry
- Nov XX Topics: Marine Ecosystems, Ecology and/or Biogeochemistry
- Dec X Topics: Impacts or Public Policies

Please sign up for the date associated with your preferred topic. If you have a partner, you can name them when you sign up, but both individuals must sign themselves up on the chosen date. We will assign and coordinate partners for singles once signups are completed.

There are limited numbers of spots for each date, so choosing early gives you more options for your topic. Sign-up **must be completed through D2L by 11:59pm on September XX**. Anyone not signed up will be randomly assigned to one of the unfilled opportunities and a partner on September XX after class.

Please consider your other classes and schedule for the semester when choosing a presentation date – it might be preferable for you to choose an earlier date if your schedule/workload is less busy earlier in the semester.

Your presentations will be "critiqued" by the class, the TA, and the instructors. You will be given anonymous praise, feedback, comments and/or helpful advice on your presentations. You are also expected to give anonymous praise, feedback, comments and/or helpful advice on all of the other presentations. A handout detailing this assignment will be provided online during the first week of classes. Presentations are peer-reviewed by all students

- In-class students (Section 001) must make their presentations during class time (9:30-10:45a)
- On-line students (Section 002) must make their presentations on the same dates, but there will be blocks of time in the afternoon (~2-3 pm) and evening (~7-8pm) to choose from.

Graduate Proposals: Oral and Written Practice (20% of your grade – Grad only):

Part 1: Project Summary
Draft a Project Summary, including title describing your own current research project (1 page, single-spaced). A project summary should be readable in isolation from the rest of the proposal (i.e. no references or figures), and it should give a concise statement of your research question, the methods you are using to address it, and its significance to your field and science broadly (2/3 page). It should also include a "Broader Impacts" paragraph, where you describe ancillary benefits to society from your project (1/3 page). We will give you an assessment and constructive feedback based on our experience with the proposal process. More details and examples will be available through D2L.

Part 2: Elevator Pitch
Prepare and rehearse an "Elevator Pitch" for your project (preferably your dissertation or thesis project). In an "elevator pitch", you **succinctly** describe your research, say why it is important and relevant, and why a Program Manager should fund it. Imagine that you are on an elevator with a senior scientist or program manager, and **you only have a minute or two** to explain and generate excitement for your research. We (and your fellow grad students) will give you helpful feedback. More details will be available through D2L.

Part 3: Letter of Intent
Many proposal calls require what is known as a "Letter of Intent", which is a concise document presenting the nuts and bolts of a proposal that will be evaluated before a complete proposal is submitted. An LOI should **identify the problem that you hope to address**, and within **2 pages (not more)**, convince a funding agency that **your idea has merit and is worth further consideration**, and (hopefully) funding. The scientific question in your LOI may be the same as your "Elevator Pitch" or something different, but we hope you will present something directly related to your dissertation and/or follow-up issues. More details will be available through D2L.

Participation (25% of your grade): Participation includes regular participation in discussions and

peer evaluations (as appropriate) and in-class activities throughout the semester that require turning in written material. These points are not automatic, so come to class and be ready to talk in discussions.

- Participation also includes a **5-point lecture assessment after each lecture** that must be completed by 11:59pm on the day *following* the lecture. Think of it as 5 points for attendance.
- These questions are designed to ensure understanding of the main concept(s) in each lecture, and are typical of questions that appear on exams and quizzes.
- You have until 11:59pm of the day following the lecture (Wed at 11:59pm or Fri at 11:59pm) to complete the lecture assessment.
- You will receive instant feedback on these questions and we encourage you to review the material and try the question again if you don't get it the first time. You can take each assessment as many times as you wish to ensure that you get the full 5 points each time.
- You will only be graded out of 100 points for these assessments (your best 20 lectures, we will drop the 4 lowest assessments).
- No make-ups or extensions will be allowed since we drop the lowest 4 scores.

Extra credit: (For both 478 and 578): You may receive the equivalent of 3% of your final grade by attending global change-related scientific presentations on campus and writing a summary of each (1% per write-up). The event should be a research presentation sponsored by a department or school - not a public science talk. Guidelines and requirements for each extra credit summary are posted on D2L. The writeup must be submitted to the Extra Credit Dropbox no later than 10 calendar days following the talk, and all submissions must be received by Friday, December XX, 20XX at 11:59pm.

Grading Scale and Policies

We will use a standard curve for assigning letter grades (A≥90%, B≥80%, C≥70%, D≥60%).
Grades will be calculated as follows:

- 3 exams, non-cumulative 30%
- Assignments 25%
- Presentation (undergraduates) or proposal (graduates) 20%
- Class participation, assessments, discussion, in-class activities 25%

The differences between the undergraduate-level (478) and graduate-level (578) grading and experience will be primarily through the presentation/proposal requirement. Undergraduates are expected to work in pairs to research, prepare and present a 10-12-minute report on one of several topics related to the class material. Graduate students are expected to prepare a standard 1-page NSF-style project summary, a 1-2 minute "Elevator Pitch" to be given orally, and a 2-page "Letter of Intent" on a research topics related to global change and their specific field of study.

Dispute of Grade Policy:
It is **YOUR** responsibility to address grading concerns promptly **within 2 weeks of the assignment due date or exam date**. We will post grades to D2L and return materials to you within one week of the due date or exam date. You then have one additional week to review your graded material and make sure that the grade on the paper matches the grade posted in D2L. If no grade is posted, it is our assumption that you did not hand in the assignment, so it is your responsibility to let us know if we are in error. **We will NOT alter your posted grade after the 2-week window has passed.** If a week has passed since you handed in an assignment and you do not have a grade or are unhappy with your grade – please contact us so we can address your concerns.

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies, which are available at https://www.registrar.arizona.edu/grades/incomplete-i-grade and https://catalog.arizona.edu/policy/registration-tuition-fees/registration-enrollment/change-schedule respectively.

Accessibility and Accommodations

Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let us know

immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit http://drc.arizona.edu.

If you have reasonable accommodations, please plan to meet with Joellen or Scott by appointment or during office hours to discuss accommodations and how these course requirements and activities may impact your ability to fully participate.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

If at any time you are not doing as well in the class as you should be, please seek some advice!

- **Academic advising**: If you have questions about your academic progress this semester, or your chosen degree program, please note that advisors at the Advising Resource Center can guide you toward university resources to help you succeed.
- **Life challenges**: If you are experiencing unexpected barriers to your success in your courses, please note the Dean of Students Office is a central support resource for all students and may be helpful. The Dean of Students Office can be reached at 520-621-2057 or DOS-deanofstudents@email.arizona.edu.
- **Physical and mental-health challenges**: If you are facing physical or mental health challenges this semester, please note that Campus Health provides quality medical and mental health care. For medical appointments, call (520-621-9202. For After Hours care, call (520) 570-7898. For the Counseling & Psych Services (CAPS) 24/7 hotline, call (520) 621-3334.

Inclusiveness & Diversity

- Inclusive Excellence is a fundamental part of the University of Arizona's strategic plan and culture. As part of this initiative, UA embraces both the principles and the practices of diversity and inclusiveness. These values are expected, respected and welcomed in this course. See https://law.arizona.edu/about/diversity
- The University recognizes that many members of its community use names other than their legal or official names first provided to the University (official/legal name) to identify themselves. For some, a chosen or preferred name may be an important component of their identity, especially their gender identity. If you would prefer that a different name from your legal one or the one that appears on the class roster be used in our classroom, please email us, so that we can use the best name and pronouns for you. As the course includes group work and in-class discussion, it is vitally important for us to create an educational environment of inclusion and mutual respect.
- University of Arizona students and employees may choose to identify themselves within the University community using a preferred first name that differs from their official/legal name. A student or employee's preferred name will appear instead of the person's official/legal name in select University-related systems and documents, provided that the preferred first name is not being used for the purpose of misrepresentation. Please see the following link for more information: https://ccc.arizona.edu/student-spaces/student-culture-and-engagement-hub/sumc-404-student-space

Equity & Title IX

- At the University of Arizona, we strive to create a working, learning and living community where all members and visitors feel welcomed and valued. The Office of Institutional Equity (OIE, https://equity.arizona.edu/) is committed to supporting a campus culture where all members of our community have equitable access to academic and professional opportunities and are supported in their individual and collective pursuits and efforts.
- The University of Arizona is committed to removing educational barriers created by sex discrimination and sexual harassment. Sex discrimination under Title IX can include acts of violence based on sex, such as sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) has experienced or experiences any of these incidents, you have options for help at the University. The University of Arizona has staff members trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more.

- Please be aware that UA faculty and instructors who work with students are required to report allegations of sex discrimination to the Title IX Office. This means that if you tell us about a situation involving sexual harassment, sexual assault, dating violence, domestic violence, or stalking that involves another student or employee, or that happens on campus or in a UA program, we **must** share that information with the Title IX Coordinator. Although we have to make that notification, *you will have choices* regarding whether or not you want to pursue a formal complaint against anyone on campus. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need.
- If you wish to speak to someone privately, you can contact the on-campus resources listed below.

Additional Resources for Students

- UA Academic policies and procedures are available at: http://catalog.arizona.edu/policies.
- Student Assistance and Advocacy information is available at: https://deanofstudents.arizona.edu/support/student-assistance
- Office of Diversity: https://law.arizona.edu/about/diversity
- Office of Institutional Equity: https://equity.arizona.edu
- Campus Health Counseling and Psych Services: https://caps.arizona.edu/
- Campus Health Survivor Support Services: https://survivorsupport.arizona.edu/
- Campus Health, https://health.arizona.edu/home, (520) 621-6490
- University of Arizona Ombuds, https://ombuds.arizona.edu/, (520)-626-5589
- Title IX section on sexual assault support & resources (https://equity.arizona.edu/title-ix) has more information, as well as a link explaining options if you have a concern, need assistance/support, or would like to file a complaint.

Campus Pantry

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. In addition, the University of Arizona Campus Pantry is open for students to receive supplemental groceries at no cost. Please see their website at: *campuspantry.arizona.edu* for open times.

Classroom Behavior Policy

To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, making phone calls, web surfing, etc.).

The use of laptop computers or iPads/tablets is permitted during class for taking notes or class-related activities, as long as you are not disrupting the learning environment,

We use SLIDO (www.slido.com) in class to encourage participation, understanding and engagement. SLIDO is NEVER used for graded material in this class.

The use of cell phones for voice or text communication during class is a distraction to the learning environment and is therefore prohibited. If you have to make or receive a call/text during class, please step into the hallway and return when you are done.

The recording of any portion of a lecture with a camera, cell phone, laptop, iPad, tape recorder, etc., is expressly prohibited without the prior authorization of the instructor. Contact Scott or Joellen before you record any lecture.

Lecture recordings will be provided and may only be used at the discretion of the instructor. Students must access content through D2L only. Students may not modify content or re-use content for any purpose other than personal educational reasons. All recordings are subject to government and university regulations. Therefore, students accessing unauthorized recordings or using them in a manner inconsistent with UArizona values and educational policies are subject to suspension or civil action.

UA Policy on Disruptive Behavior In An Instructional Setting:

See https://deanofstudents.arizona.edu/student-rights-responsibilities/student-code-conduct and http://policy.arizona.edu/education-and-student-affairs/disruptive-behavior-instructional-setting

for the complete policy.

- **Disruptive Behavior is Prohibited**: "Disruptive behavior" means conduct that materially and substantially interferes with or obstructs the teaching or learning process in the context of a classroom or educational setting. Disruptive behavior includes conduct that distracts or intimidates others in a manner that interferes with instructional activities, fails to adhere to an instructor's appropriate classroom rules or instructions, or interferes with the normal operations of the University.
- Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

UA Policy on Threatening Behavior By Students:

See http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students for the complete policy.

- **Threatening Behavior is Prohibited:** "Threatening behavior" means any statement, communication, conduct or gesture, including those in written form, directed toward any member of the University community that causes a reasonable apprehension of physical harm to a person or property. A student can be guilty of threatening behavior even if the person who is the object of the threat does not observe or receive it, so long as a reasonable person would interpret the maker's statement, communication, conduct or gesture as a serious expression of intent to physically harm.
- The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself.

Notification of Objectionable Materials

Although it is not our intention, class discussion may contain material of a mature nature, which may include explicit language, and/or discussions of unsettling behaviors and/or violence. The instructor will attempt to provide advance notice when such materials will be used. Students are not automatically excused from interacting with such materials, but they are encouraged to speak with the instructor to voice concerns and to provide feedback.

Code of Academic Integrity

Academic dishonesty is not tolerated. This includes any representation of someone else's work as your own, such as copying material from the internet or a classmate. Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Student Code of Conduct (https://deanofstudents.arizona.edu/student-rights-responsibilities/student-code-conduct) and the UA Code of Academic Integrity (https://deanofstudents.arizona.edu/policies/code-academic-integrity). Together with the Geosciences department's statement on academic integrity these will govern how we will treat such incidents. For example, any work taken from other sources should be rephrased in your own words, and followed by a citation to the original source. (The use of lengthy direct quotations in science is not good practice; please avoid this.) Working with others is fine but you should always rephrase your answers in your own words and style. Identical written work will be taken as evidence of academic dishonesty. Consequences for academic dishonesty in this class include zero credit on an assignment, and/or failing the class, and initiation of disciplinary procedures at the college level that can lead to suspension or expulsion from the university. Repeated episodes of academic dishonesty (including facilitation thereof) must be reported to the Dean of Students and the College of Science.

Policies of the University of Arizona

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. (https://deanofstudents.arizona.edu/policies/code-academic-integrity)

The University Libraries have some excellent tips for avoiding plagiarism, available at http://new.library.arizona.edu/research/citing/plagiarism.

Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor's express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

Violations of the UA Code of Academic Integrity are serious offenses at the University of Arizona. As your instructors, we will deal with alleged violations in a fair and honest manner. As students, you are expected to do your own work and follow class rules on all tests and assignments unless we indicate differently. Alleged violations of the UA Code of Academic Integrity will be reported to the Dean of Students Office and may result in sanction(s) (i.e., loss of credit on assignment, failure in class, suspension, etc.)

Policies of the Department of Geosciences, University of Arizona

1. Underlying Principle: Unless specified in the assignment, all work and all words used to describe the results of an assignment must be the student's own. No material, whether paragraphs, sentences or phrases may be copied from another student or from any external source. External material that is used, usually for a specific reason, must be accompanied by a citation of the source.
2. Individual Assignments: In some cases, students will be told that no conferring is allowed; if that is the case, students must not discuss their work with others, or show others their work. More often, Geosciences faculty will encourage discussion among students, because this facilitates learning. In such a case, any ideas and concepts may be discussed openly, but the student is still responsible for his/her own work turned in for grading. Identical paragraphs, sentences, phrases, or notations on a map/illustration cannot be used by two or more students. The best way to avoid this is for students to discuss the assignment, but then separate from each other in order to produce the work to be turned in for grading, and not share electronic files using e-mail, flash drives or other methods.
3. Group Assignments: Geosciences faculty routinely give two kinds of group assignments. Category 1 is a group assignment where students work in parallel on the same material (for instance a mapping exercise), but then turn in individual work for grading. Discussion is encouraged, but it is essential that each student do the written or map work individually first, after which ideas may be exchanged and interpretations modified before the work is graded. Copying of another's work is prohibited, and this can be avoided in the same way as for individual assignments. Category 2 is a group assignment where students work explicitly as teams, perhaps with each member performing parts of a complex task (such as a geophysical or analytical experiment), and a combined product will be graded with equal scores for all members of the team. In this case, full discussion of the work, before any write-up takes place, is expected.
4. Reporting of Cheating: All incidents of cheating or plagiarism, including facilitating of same, will be reported to the Dean of Students' office and the College of Science. As well as the violations in take-home or field assignments detailed above, this will include any violations during quizzes and exams. The University's procedure and forms give students an opportunity to explain to the instructor, and to comment upon (or rebut) any accusations in writing before the forms are turned in. But the forms can be turned in, reporting the cheating incident, even if the student fails to meet with the instructor or does not countersign the paperwork.
5. Expectation of Student Integrity: Instructors in the Department of Geosciences set a high standard for themselves as educators, and they expect that students, both in general education and majors' classes, will do the same for their own education. Thus cheating and plagiarism will not be tolerated.
6. UA Code of Academic Integrity: The above policies are a statement of what students and faculty should expect within Department of Geosciences, or in general education courses offered by the Department. It does not replace the UA's Code of Academic Integrity (see above).

UA Nondiscrimination and Anti-harassment Policy

See http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy for the complete policy.

- The University is committed to creating and maintaining an environment **free of discrimination**.
- Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We want to create a tolerant and open environment where such opinions

can be expressed without resorting to bullying or discrimination of others.

Confidentiality of Student Records

http://www.registrar.arizona.edu/personal-information/family-educational-rights-and-privacy-act-1974-ferpa?topic=ferpa

Subject to Change Statement (This version is dated XX/XX/XX)

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructors.