

GEOS 170A1 *Earth: From Birth to Death?* Section 001, Fall 2021

Instructor: Dr. Jessica Kapp jkapp@email.arizona.edu

Office: Gould Simpson 324

Office Hours: By appointment. Email Dr. K to request an in-person or Zoom meeting.

Teaching Assistants: Maya Prabhakar (mayaprabhakar@email.arizona.edu); Sakinah Muhammad (sakinahm@email.arizona.edu) – Office Hours posted on d2l.

Class is taught in person and meets M, W, F from 12:00 – 12:50 p.m. in Social Sciences 100

Class Attendance: Class attendance is important. This is a large enrollment class, and the CDC has stated, regardless of vaccination status, *“To maximize protection from the Delta variant and prevent possibly spreading it to others, wear a mask indoors in public if you are in an area of substantial or high transmission,”* which we are in southern Arizona. Please see the University of Arizona COVID19 Response page for mask requirement details. See signage on classroom doors for specific classroom policy. <https://covid19.arizona.edu/>

If you feel sick or may have been in contact with someone who is infectious, stay home. Except for seeking medical care, avoid contact with others and do not travel.

- Notify Dr. K or a TA (via email) as soon as you become ill so we can work with you on meeting deadlines or alternative work options.
- If you must 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.
- Voluntary, free, and convenient [COVID-19 testing](#) is available for students on Main Campus.
- If you test positive for COVID-19 and are participating in on-campus activities, you must report your results to Campus Health. To learn more about the process for reporting positive test results, visit the [Case Notification Protocol](#).
- The COVID-19 vaccine is free and available for all students at [Campus Health](#). All students are encouraged to get the vaccine as soon as possible, as a responsible member of the university and southern Arizona communities.
- Do not take chances with spreading COVID-19. We are in this together.

Course Materials and Class Logistics:

- **REQUIRED: Lecture Tutorials for Earth Science, by *Kortz and Smay*** – Available in the UArizona bookstore. We will use this book in almost every class. Please also bring paper/notebook and something to write with to every class.
- Class work is posted weekly on d2l – all weekly material posts on Monday mornings and all weekly graded work is due by the following Monday at 11:59 AM (before class begins). You can turn in work anytime over the course of the week, up until the following Monday at 11:59 AM.
- It is your responsibility to turn in work before the Monday deadline each week.
- We drop several grades (lowest) in each graded category except exams (see details below).

Life Challenges: 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: 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 and Psych Services (CAPS) 24/7 hotline, call (520) 621-3334.

Students with Disabilities: At the University of Arizona, we strive to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, you are welcome to let the instructor(s) know so that we can discuss options. You are also encouraged to contact Disability Resources (520) 621-3268 to explore reasonable accommodation. <https://drc.arizona.edu/>

Seeking Help: The TAs (Sakinah and Maya) will hold office hours and review sessions in person and/or on Zoom - please drop-in any time. Days/times/Zoom links will be posted on d2l. Dr. K will meet with students in person or via Zoom by appointment - it is your responsibility to email the instructor or a TA to set up individual appointments for help if you need to do so. Email is the best way to get a quick response from Dr. K or a TA.

Class policies and conduct: All students must be able to engage in learning in a *distraction free* environment. When attending class, please be courteous, attentive, and practice civil discourse. Refrain from using electronic devices. Follow posted classroom mask policy. Students who engage in disruptive behavior will be asked to leave. Thank you.

Academic Integrity: Please read the Code of Academic Integrity at the website provided below. All cases of cheating/plagiarism will be referred to the Dean of Students.

<http://deanofstudents.arizona.edu/codeofacademicintegrity>

Other Sources of Help and Information:

- The Department of Geosciences main office is room 208 Gould-Simpson, 621-6000.
- The Geosciences Department website is <http://www.geo.arizona.edu>.

Policy on threatening behavior:

The university seeks to promote a safe environment where students and employees may participate in the educational process without compromising their health, safety, or welfare. The Arizona Board of Regents' Student Code of Conduct, ABOR Policy 5-308, prohibits threats of physical harm to any member of the university community, including to oneself. Threatening behavior can harm and disrupt the university, its community, and its families.

Course learning outcomes: By the end of this course students should be able to explain the origin of Earth and its atmosphere/oceans, how earth processes (e.g., plate tectonics, rock formation/change/breakdown, landslides and floods, atmospheric/ocean circulation) relate to basic scientific principles such as density and thermodynamics; describe Earth processes and how they shape Earth's surface; link Earth processes to one another; explain how the greenhouse effect works and how it is related to human activities and global warming; describe how Earth processes/geological hazards affect humans/society; list factors that contribute to climate and climate change; discuss the future of planet earth based on current trends in population, energy use, and climate change.

Date	Class Topics by Week	Tutorials (in workbook	Activities (docs on d2l)
M 8/23	Intro – The Scientist Perspective		
W 8/25	Origin of the Universe		Doppler Shift and Expansion of the Universe
F 8/27	Origin of the Solar System	Rocky Inner Planets v. Gaseous Outer Planets	
M 8/30	Geologic Time and Age Dating		Half-Life
W 9/1	Density and Earth Layers	Outer Layers of Earth	
F 9/3	Minerals and Rocks	Rock Categories The Rock Cycle	
M 9/6	No class: Labor Day		
W 9/8	Paradigm Shift: Plate Tectonics		Continental Drift v. Plate Tectonics
F 9/10	Plate Tectonics I	Tectonic Plates and Boundaries; Seafloor ages	
M 9/13	Plate Tectonics II	Divergent Boundary Features Subduction Features	
W 9/15	Plate Tectonics III	Movement at Convergent Plate Boundaries	Transform Boundaries
F 9/17	Plate Tectonics Synthesis		Map assessment
M 9/20	Earthquakes	Locations of Earthquakes	
W 9/22	Seismic Waves and Earth's Interior	Outer Core	
F 9/24	Review for exam 1 (in class)		
M 9/27	Exam 1 (no class)		
W 9/29	Thermodynamics and Melting	Magma Source Depth	
F 10/1	Volcanoes	Volcano Types	
M 10/4	Hot Spots	Hot Spots	
W 10/6	Planetary Tectonics and Magmatism	Volcanoes on Other Planets	
F 10/8	Tsunamis	Tsunamis	
M 10/11	The Water Cycle	The Water Cycle Water Table	
W 10/13	Earth Surface Processes	Weathering	
F 10/15	Landslides	Landslides	
M 10/18	Floods	Flood Curves	
W 10/20	Groundwater	Groundwater Groundwater Contamination	
F 10/22	Origin of Oceans/Life/Atmo		Origins of Oceans, Life, Atmosphere
M 10/25	The Atmosphere	Layers of the Atmosphere Simple Atmospheric Circulation	
W 10/27	Shallow Ocean	Ocean Surface Circulation	
F 10/29	Deep Ocean	Ocean Layers	
M 11/1	Planetary Surfaces	Planet Surface Features	
W 11/3	Deserts		Deserts of the World
F 11/5	Review for exam 2 (in class)		
M 11/8	Exam 2 (no class)		
W 11/10	The Carbon Cycle	Climate Change and CO2	The Carbon Cycle
F 11/12	The Greenhouse Effect	How Greenhouse Effect Works Greenhouse Effect and Global Warming	
M 11/15	Volcanism and Climate		How Volcanoes Affect Climate
W 11/17	The Ozone Hole	Greenhouse Effect and the Ozone Hole	
F 11/19	Alternative Energy	Consequences of Global Warming Alternative Energy	
M 11/22	Glaciers and Ice Sheets	Glacier movement The Glacier Budget	
W 11/24	No class – Thanksgiving break		
F 11/26	No class – Thanksgiving break		
M 11/29	Snow and Ice	Oxygen Isotopes and Albedo	

W 12/1	Evolution		Natural Selection
F 12/3	Mass Extinctions	Scientific Hypotheses of Dinosaur Extinctions	
M 12/6	Population Growth and The Anthropocene		Population Growth and Earth's Carrying Capacity
W 12/8	Review for Final Exam		

Class Details – PLEASE READ before contacting Dr. K or TAs with logistical questions

Tutorials and Activities

- Every class will use corresponding tutorial(s) from the tutorial book (*Lecture Tutorials for Earth Science by Kortz and Smay*) and/or activities created by the instructor. All tutorials are available in the required workbook, and activities that are not in the workbook will be posted on d2l.
- Tutorials and activities are not turned in or graded, but are your study guide for exams. It is imperative that you put your best effort into your tutorials and activities.

Participation

- There will be one participation question per class topic, completed on d2l. Your four lowest participation scores will drop. Participation points cannot be made up – all participation questions will post on Monday mornings and will be due by the following Monday at 11:59 AM (right before class begins).

Assignments

- Assignments are turned in to the assignments folder on d2l for a grade.
- There will be five assignments. Your one lowest assignment grade will drop.
- There are no make ups on assignments as you will have a week to complete them.
- You are encouraged to work with other students on these assignments, but you must submit answers in your own words. There is a difference between collaborating and cheating – if you are unsure about this distinction, please ask Dr. K or a TA to clarify.
- Copying another student's answer(s) word for word is cheating and cutting and pasting from the internet is cheating.
- Assignments will post on Monday mornings and will be due by the following Monday at 11:59 AM (before class begins). Please note: we don't have assignments every week.

Quizzes

- There will be one quiz per class topic. Each quiz is five questions or less and is on material from the class it corresponds to.
- All quizzes will post on Monday mornings and be due by the following Monday at 11:59 AM (before class begins).
- There are no make ups on quizzes, and your four lowest quiz grades will drop.
- You may use your notes and posted class materials to complete quizzes.
- You will have two attempts at every quiz, and the highest score will automatically count.

Discussion Board Posts

- Each week, Dr. K will post a question or topic to the discussion board. Topics may include related visuals (pics, short videos, graphs). These are meant to enhance your understanding of the material. Students will earn one extra credit point per discussion board post they respond to, which will be added to an upcoming exam. Discussion board responses will only earn credit if they are thoughtful and well written. One-word responses, or short responses that do not address the topic or question, will not receive any credit. Students can create as many responses as they want, but a maximum of one extra credit point per discussion topic will count towards exam scores. Please be respectful on the discussion board. Students who are inappropriate or dox other students will lose discussion board privileges and be reported to the Dean of Students.

Exams

- Three exams will be given this semester (see schedule on pages 3-4). Two are midterms and one is a non-cumulative final exam. Each is weighted equally.
- Exams will draw heavily from tutorials, activities, and assignments.
- Exams are taken on d2l. They draw randomly from question banks, so not all students get the same questions.
- Exams are timed, and once you begin you cannot exit and start again. If you are registered with DRC and get a time accommodation, you will automatically get that extra time on the exam.
- You cannot move backward through the questions.
- Students are allowed to use their course materials during an exam (notes, activities), but may not use online searches or communicate with other students during the exam.
- Students caught violating the code of academic integrity on an exam will get a zero on the exam and be reported to the Dean of Students.

Grading Philosophy

- We do not grade on a curve.
- We generally do not offer make-ups on graded work as we drop several grades, and you have one week to complete all work at your pace.
- You can check your grades on d2l any time - please check your grades regularly and contact the instructor with any questions or concerns.
- If you have questions about a grade, please raise them within ONE WEEK of the grade being posted on d2l. After one week, no changes will be made.
- No extra credit opportunities will be given at the end of the semester, and no alternative assignments or work will be given to “boost” your grade. Please keep up with weekly work.
- If you have a serious illness or emergency that prevents or will prevent you from turning in work on time, you must contact the instructor immediately so alternatives can be discussed. The end of the semester is too late to try and recover missing points.

Basis for Your Course Grade

Grades are weighted as follows:

Participation	15% of overall grade (0.43% each, highest 35 count)
Quizzes	20% of overall grade (0.57% each, highest 35 count)
Assignments	30% of overall grade (7.5% each, highest 4 count)
Exams	35% of overall grade (11.66% each, all 3 count)
Total possible	100%

Note: To get an A in the class you must earn at least 90%. No exceptions.

Your final grade for the course (3 units) is based on the following grand total scores:

≥90% = A ≥80% = B ≥70% = C ≥60% = D less than 60% = E

NOTICE: ALL CLASS POLICIES ARE SUBJECT TO CHANGE AT ANY TIME. STUDENTS WILL BE NOTIFIED OF ALL SIGNIFICANT CHANGES. CHECK D2L REGULARLY.