

Planetary Sciences 170A1-001
 Evolution of a Habitable World
 Tier-One General Education Course
 Flandrau Planetarium, TTh 2:00-3:15

Instructor:

Dr. Steve Kortenkamp, Department of Planetary Sciences, Kuiper Space Sciences 353.
See course D2L Content page for TA information, email addresses, student hours, etc.

Course Objective and Expected Learning Outcomes:

We will examine the origin of the sun, of Earth and the Moon, and of the solar system generally. The evolution of Earth as a habitable planet will be explored. A student who successfully completes the course will develop a broad understanding of many fundamental concepts in Earth and space science, together with an appreciation of the discoveries and reasoning that led to this understanding. The course is a Tier-One general education class for non-science majors but will involve routine mathematics and technical skills (e.g., algebra, geometry, scientific notation, telescope observing, Excel, light video editing, etc).

Course Components:

The course will involve in-class participation, homework assignments, exams, and an out-of-class project. The schedule of exams and assignment due dates will be announced in class and posted on the class D2L page.

Division of Grade Between Course Components:

Each student must design their own customized weighting for the different components of the course from the allowed ranges listed below. Your total weighting must add up to 100%. For most students it is anticipated that about 40% of the grade will be determined by the mid-point of the semester (8th week). Please use 5% increments when selecting your grade.

5%	Mandatory Assignments		
0-15%	In-Class Participation	Example 1	Example 2
0-40%	Homework Assignments	Mandatory	Mandatory
0-50%	Term Project	In-Class	In-Class
0-40%	Mid-Term and Final Exams	Homework	Homework
-----		Term Project	Term Project
100%	Total must equal 100%	Exams	Exams
		Total	Total
		100%	100%

Final Letter Grade:

The nominal scale shown to the right will be used to determine the final letter grades in the course .

- A: 90% and higher
- B: 80-89%
- C: 70-79%
- D: 55-69%
- E: below 55%

General Content of Course:

- Introductory Tour of the Solar System
- Largest and Smallest Size and Distance Scales
- Motions in the Sun-Earth-Moon System
- Forces and Energy in Context of the Solar System
- The Spectrum of Light
- Fission, Fusion, Formation of Elements
- Radioactivity and Isotopes
- Impact Cratering
- Geologic Activity on Earth
- Earth and the Solar System Through Time
- Earth-like planets around other stars

Course Administration:

Class is held in the Flandrau Planetarium.

The course web page is maintained through D2L. Homework and other written assignments must be submitted electronically to D2L assignment folders. The D2L folder will automatically check your work for plagiarism. Because of this plagiarism check, the vast majority of you who do your own work and cite your sources of information properly will not have to compete with students who commit plagiarism.

The Turning Technology Student Response “clickers” will be used in this class. New clickers are available at the Student Union Bookstore, but many older models of Turning Technology clickers may also work.

Homework, In-Class Activities, Projects, and Exams:

There will be weekly homework assignments during the course. The assignments will be announced in class and will be available for download from the course D2L web site. Solutions will be posted after assignments are turned in. To ensure fairness to all students, late homework will not be accepted after the deadline.

We will have occasional work to be completed in-class. The type of in-class activities will vary. You may work together with small groups of 2-4 students to discuss these in-class activities, but will be expected to hand in your own work. The activities will be due at the end of the class in which they are assigned.

There will be mid-term exams and a final exam, all of which are cumulative. The exams will cover all aspects of the course, including in-class work, homework, and aspects of the term project that are covered in class. Exams taken in the normal classroom setting will be multiple choice and allow for partial credit if more than one choice is needed to arrive at the correct answer (using the scratch-off IF-AT testing method).

The dates of the exams will be posted on the class web page and announced in class. Exhibiting suspicious behavior during an exam may result in confiscation of your exam and/or a zero for the exam grade.

The final exam will be held on the date/time designated by the registrar, as indicated at registrar.arizona.edu/schedules/finals.htm

Writing Requirement:

As this is a Tier-One General Education course the required work is moderately writing intensive (see gened.arizona.edu/content/writing-component). Over the course of the semester a minimum of 10 pages of written work will be required, distributed among homework assignments, in-class participation, the term project, and the two mandatory assignments. Guidelines for the expected structure of these writing assignments will be provided, along with details on which assignments will have opportunities to receive feedback and submit revisions for grading.

Alternative Exams:

Alternative exams will be available for students who are absent either for University-approved activities (prior notice required), or due to illness (documentation required within 24 hours). For all exams taken outside of the scheduled exam period and/or the class lecture hall (e.g., at the DRC) the instructor reserves the right to use an alternative exam format from that used for the regular in-class exam. Based on previous experience this alternative format may be considerably more difficult than the regular in-class multiple-choice exam. Students registered with the DRC and requesting extra time to complete an exam will be accommodated in the normal classroom so that they can take the normal exam. Don't go to the DRC for an exam without first speaking with the instructor to verify this accommodation.

Appropriate Use of Cell Phones and Other Electronic Devices in the Classroom:

Only class-related use of a phone or laptop is allowed (e.g., taking notes, pictures of slides, calculator functions, etc). Using your phone or laptop for other purposes (e.g., texting, Facebook, movies, shopping, using apps, etc) makes teaching more difficult. Please respect the professor and TAs and let them do their jobs. If your use of a phone, laptop or other device creates a distraction to other students or to the instructor/TA you will be asked to leave and will not be allowed to return to class until meeting with the instructor. If the behavior continues you will be dropped from the class and reported to the Dean of Students for violating the UA Code of Student Conduct.

Errors in Grading:

An effort will be made to hand back material in a timely manner. Make sure to review all of your graded material as soon as possible. Occasionally errors in grading may occur. If you spot such an error, you must call it to the attention of the TA or instructor **within one week**.

Extra Credit:

There will be significant opportunities for extra credit during the semester. The total amount of extra credit that can count towards the final overall letter grade is capped at 5%.

Absence and Class Participation Policy:

The UA policy concerning Class Attendance, Participation, and Administrative Drops is available at:

catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable:

policy.arizona.edu/human-resources/religious-accommodation-policy

Absences preapproved by the UA Dean of Students (or dean's designee) will be honored. See policy.arizona.edu/employmenthuman-resources/attendance

Participating in the course and attending lectures and other course events are vital to the learning process. As such, class attendance is strongly encouraged. Students who are unable to attend class on days of assignment deadlines (due to illness or emergency) are required to bring documentation from their health-care provider or other relevant, professional third parties. Failure to submit third-party documentation will result in unexcused absences.

Accessibility and Accommodations:

It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations. Please be aware that the accessible tables and chairs in this room should remain available for students who find that standard classroom seating is not usable. Students registered with the DRC and requesting extra time to complete an exam will be accommodated in the normal classroom so that they can take the normal exam (see Alternative Exams above).

Honors Credit:

As this is a Tier One General Education course it is available for Honors credit. Honors contract information is available at www.honors.arizona.edu/future-students/honors-credit-across-campus. See the instructor to discuss your ideas for an honors contract.

Makeup Policy for Students Who Register Late:

Students who register by the end of the second week of classes may be given an opportunity to make up one missed assignment within a reasonable time to be mutually agreed upon by the instructor and student.

Course Communications:

Communication will primarily be done with in-class announcements and, to a much lesser extent, through the course D2L page. If email communication with the instructor or TAs is needed please use only your official UA email address to avoid the chance of your message being rejected as SPAM.

Required Extracurricular Activities:

Depending on a student's choice of customizable grading scheme (see page 1), significant out-of-class activities may be involved during the term. These will be discussed at length in the beginning of the semester.

Required or Special Materials:

No special materials are expected to be involved with this class.

Academic Integrity:

Both students and faculty are bound by the University's Code of Academic Integrity, which covers many forms of academic dishonesty. 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. This means that work submitted in your name must be the result of your own scholarly efforts. In this course it is typical each semester for 5-7 students to be caught plagiarizing on homework or attempting to cheat on the term project. Every such incident is reported to the Dean of Students. Don't be one of these students! Details on the code of academic integrity are available at:

deanofstudents.arizona.edu/policies-and-codes/code-academic-integrity

The University Libraries have some excellent tips for avoiding plagiarism, see:

www.library.arizona.edu/help/tutorials/plagiarism/index.html.

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 unrelated to class work. See the explicit phone and laptop policy on page 3 above.

This course also supports elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request. As the course includes some group work and in-class discussion, it is vitally important for us to create an educational environment of inclusion and mutual respect.

Threatening Behavior:

UA policy prohibits any and all threats of physical harm to any member of the University community. "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. Any behavior that can be interpreted as possibly threatening will be immediately reported to the Dean of Students. Details on the policy are available at:

policy.arizona.edu/education-and-student-affairs/threatening-behavior-students.

Nondiscrimination and Anti-harassment:

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 also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others. Details on the official UA policy are available at:

policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

Additional Resources for Students:

UA Academic policies and procedures are available at catalog.arizona.edu/policies.

Student Assistance and Advocacy information is available at:

deanofstudents.arizona.edu/student-assistance/students/student-assistance

Confidentiality of Student Records:

Discussion of any issues related to grades of any kind will only be done in person, NEVER over email. All student records, not just grades but also any identifiable material submitted for credit are handled according to FERPA guidelines, see www.registrar.arizona.edu/ferpa/default.htm

Subject to Change Statement:

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