



College of the Environment, Forestry,
and Natural Sciences



Syllabus

Course: AST 184L: Life in the Universe Laboratory
Department: Astronomy and Planetary Science
Prerequisite or Corequisite: AST 183
Term: Spring 2021
Section(s) & Day(s): Asynchronous
Meeting Time: Asynchronous
Mode of Instruction: Video lectures & bbLearn-based labs
Meeting Location: Zoom (office hours only)
Number of Course Credit(s): 1

Lab Instructor: Colin Orion Chandler
Pronouns: he/him/his
Phone/SMS/iOS/WhatsApp: +1 415 310 4202
e-mail: orion@nau.edu
e-mail subject: Subject line must contain "AST184"
Office Location: Zoom – see bbLearn and/or email
Office Hours: TBA & by appointment

Required Materials

A computer, tablet, or other suitable device for Zoom and to complete the labs. A pen/pencil, tablet, or other device suitable for sketching things like the phase of the moon or anything else you might need. A digital camera (like on your phone, tablet, or computer) or a scanner (like those in the Cline Library) if you wish to print pages to work on; for example, you might prefer sketching the phase of the moon on paper, then submit that sketch through bbLearn.

A Quick Note

I think we can all agree that this semester will be strange, partly due to the stresses of being amidst a pandemic but also due to our new online-only format for this lab. Let's all take this into consideration as we progress through the semester. I am here to help, so don't hesitate to reach out if any problems arise.

Course Description

This one-credit laboratory complements the lecture course AST 183: Life in the Universe, a multidisciplinary exploration of modern scientific inquiry into the question of life's origin, evolution, and future place in the Universe. Due to this course being taught online, students will not have the opportunity to work in a physical lab setting but will occasionally be presented with hands-on experiences. There will also be some suggested 'field trips' that students can take around Flagstaff. If you are not currently in the area, a Google Earth view will be provided, so that you may still gain the experience.

Course Objectives

This lab will broadly focus on:

1. The astronomical setting for life as we know it
2. Nearby stars and the prospects for life
3. The evidence used to construct our picture of the history of complex life on Earth

Course Structure

We endeavor to deliver quality instruction while also keeping everyone as safe as possible during the COVID-19 pandemic. Because of this, we have opted to switch AST184L to an online-only format this semester. Every Saturday at 8:00 AM, a lab with an accompanying video will be posted to bbLearn. Students have until the following Friday at 11:59pm to complete the one lab, which should also be submitted on bbLearn. Students will be randomly assigned a group at the beginning of the semester and are expected to work as a team to complete the lab each week. The group only needs to submit one lab for the entire group. The class does not have an official meeting time, although I will be available via Zoom by appointment and during a time T.B.D.

The structure of the class is still in flux, though this is not the first time we have delivered the course in this fashion. Your instructor will inform you ahead of time if any changes become necessary.

Lab Reports

The worksheets for the reports will be made available on bbLearn starting at 8:00am on Saturday and will be due by 11:59pm the following Friday. Starting at Lab 3, these are expected to be submitted individually, although it is encouraged that you work with your group mates. Since everything will be submitted online, there are a few routes that can be taken to upload sketches (if any). 1) Use a tablet and stylus to draw directly onto your lab report, 2) Draw by hand and then take a picture using a phone, tablet, or camera and then attach to the image to the document, 3) Draw by hand and scan in with a scanner and then attach the image to the document. If none of these options are feasible, please contact me and we will figure out an accommodation.

Midterm Quiz and Final Project

There will be a midterm quiz and a final project. Both of these will be completed individually. The midterm quiz will be multiple choice and timed. You will have the standard week to complete it (you will have access starting on Saturday at 8:00am and it must be completed by Friday at 11:59pm), but once you open the quiz you will only have one hour to complete it. After the time is up, your quiz will be submitted whether or not you are finished. Do note though that it is open note.

The final project details will be given during the week of the Geology Basics lab and will be due at the end of the semester. This will involve creating a story about a rock's history and delivering it in a creative way (e.g., a video, a comic, a short story). A rubric will be given out that provides more detail.

Grading System

The breakdown of your grade is as follows:

Lab Reports: 70% Midterm Quiz: 10% Final Project: 20%

The grading scale will be:

A \geq 90% B \geq 80% C \geq 70% D \geq 60% F < 60%

Make Ups

The midterm quiz cannot be made up. Please have disability services contact me if you need any accommodations for test taking. If a problem occurs with your internet connection while taking a quiz or you have any other issue, contact me. I will ensure that you can complete your quiz. For the lab reports, you can make up a total of two throughout the semester: you are allowed to make up one with no questions asked and one with a viable excuse.

Course Schedule

A course schedule that includes the lab topics, dates of quizzes, and additional material will be published in bbLearn during the first week of the semester. If there is no specification (e.g., cheat sheet or article) next to the content in the Readings/Videos section then the information will be included in the accompanying pre-recorded video for that week's lab. Otherwise, a PDF will be posted along with the video for that week.

COVID-19 REQUIREMENTS AND INFORMATION

The following statements in red set forth in this document's first section are specific to NAU's response to the COVID-19 situation. The requirements outlined below are mandatory until further notice. They are based upon current public health conditions and guidance and may change as circumstances warrant or new information becomes available. Additional information about the University's response to COVID-19 is available from the **Jacks are Back!** web page located at <https://nau.edu/jacks-are-back/lumberjack-responsibilities>.

FACE COVERING AND PHYSICAL DISTANCING REQUIREMENTS

Appropriate face masks or other suitable face coverings must be worn by all individuals when present in classrooms, laboratories, studios, and other dedicated educational spaces. To maximize the benefits of physical distancing as an important strategy to help reduce community transmission of the SARS-CoV-2 virus, instructors may implement mandatory student seating arrangements or specific seat assignments. Instructors may remove students who do not cooperate with these requirements from the instructional space in the absence of an approved accommodation arranged through Disability Resources. Failing to comply with these requirements may constitute a violation of the university's *Disruptive Behavior in an Instructional Setting* policy available at <https://nau.edu/university-policy-library/disruptive-behavior>.

USE NAUFLEX TO HELP MAINTAIN PHYSICAL DISTANCING

NAUFlex (available at <https://nau.edu/nauflex/student>) is designed to help all students actively participate in their coursework during the required day and time of a course when they are not physically present in the classroom. This course design model allows students to be fully engaged with faculty and peers and receive the high-quality educational experience for which NAU is known.

CLASS SESSION RECORDINGS FOR STUDENTS AND FACULTY USE ONLY

Certain class sessions may be audio or video recorded to help reinforce live instruction during the COVID-19 pandemic. These recordings are for the sole use of the instructor and students enrolled in the course. Recordings will be stored in approved, accessible repositories. By enrolling, students agree to have their image and classroom statements recorded for this purpose, to respect the privacy of their fellow students, and university-owned intellectual property (including, but not limited to, all course materials) by not sharing recordings from their courses. Questions regarding restrictions on the use of classroom audio or video recordings may be addressed to the appropriate academic unit administrator.

SYLLABUS POLICY STATEMENTS

ACADEMIC INTEGRITY

NAU expects every student to firmly adhere to a strong ethical code of academic integrity in all their scholarly pursuits. The primary attributes of academic integrity are honesty, trustworthiness, fairness, and responsibility. As a student, you are expected to submit original work while giving proper credit to other people's ideas or contributions. Acting with academic integrity means completing your assignments independently while truthfully acknowledging all sources of information, or collaboration with others when appropriate. When you submit your work, you are implicitly declaring that the work is your own. Academic integrity is expected not only during formal coursework, but in all your relationships or interactions that are connected to the educational enterprise. All forms of academic deceit such as plagiarism, cheating, collusion, falsification or fabrication of results or records, permitting your work to be submitted by another, or inappropriately recycling your own work from one class to

another, constitute academic misconduct that may result in serious disciplinary consequences. All students and faculty members are responsible for reporting suspected instances of academic misconduct. All students are encouraged to complete NAU's online academic integrity workshop available in the E-Learning Center and should review the full *Academic Integrity* policy available at <https://policy.nau.edu/policy/policy.aspx?num=100601>.

COURSE TIME COMMITMENT

Pursuant to Arizona Board of Regents guidance (ABOR Policy 2-224, *Academic Credit*), each unit of credit requires a minimum of 45 hours of work by students, including but not limited to, class time, preparation, homework, and studying. For example, for a 3-credit course a student should expect to work at least 8.5 hours each week in a 16-week session and a minimum of 33 hours per week for a 3-credit course in a 4-week session.

DISRUPTIVE BEHAVIOR

Membership in NAU's academic community entails a special obligation to maintain class environments that are conducive to learning, whether instruction is taking place in the classroom, a laboratory or clinical setting, during course-related fieldwork, or online. Students have the obligation to engage in the educational process in a manner that does not interfere with normal class activities or violate the rights of others. Instructors have the authority and responsibility to address disruptive behavior that interferes with student learning, which can include the involuntary withdrawal of a student from a course with a grade of "W". For additional information, see NAU's *Disruptive Behavior in an Instructional Setting* policy at <https://nau.edu/university-policy-library/disruptive-behavior>.

NONDISCRIMINATION AND ANTI-HARASSMENT

NAU prohibits discrimination and harassment based on sex, gender, gender identity, race, color, age, national origin, religion, sexual orientation, disability, or veteran status. Due to potentially unethical consequences, certain consensual amorous or sexual relationships between faculty and students are also prohibited as set forth in the *Consensual Romantic and Sexual Relationships* policy. The Equity and Access Office (EAO) responds to complaints regarding discrimination and harassment that fall under NAU's *Nondiscrimination and Anti-Harassment* policy. EAO also assists with religious accommodations. For additional information about nondiscrimination or anti-harassment or to file a complaint, contact EAO located in Old Main (building 10), Room 113, PO Box 4083, Flagstaff, AZ 86011, or by phone at 928-523-3312 (TTY: 928-523-1006), fax at 928-523-9977, email at equityandaccess@nau.edu, or visit the EAO website at <https://nau.edu/equity-and-access>.

TITLE IX

Title IX is the primary federal law that prohibits discrimination on the basis of sex or gender in educational programs or activities. Sex discrimination for this purpose includes sexual harassment, sexual assault or relationship violence, and stalking (including cyber-stalking). Title IX requires that universities appoint a "Title IX Coordinator" to monitor the institution's compliance with this important civil rights law. NAU's Title IX Coordinator is Elyce C. Morris. The Title IX Coordinator is available to meet with any student to discuss any Title IX issue or concern. You may contact the Title IX Coordinator by phone at 928-523-3515, by fax at 928-523-0640, or by email at elyce.morris@nau.edu. In furtherance of its Title IX obligations, NAU will promptly investigate and equitably resolve all reports of sex or gender-based discrimination, harassment, or sexual misconduct and will eliminate any hostile environment as defined by law. Additional important information about Title IX and related student resources, including how to request immediate help or confidential support following an act of sexual violence, is available at <https://in.nau.edu/title-ix>.

ACCESSIBILITY

Professional disability specialists are available at Disability Resources to facilitate a range of academic support services and accommodations for students with disabilities. If you have a documented disability, you can request assistance by contacting Disability Resources at 928-523-8773 (voice), 928-523-6906 (TTY), 928-523-8747 (fax), or dr@nau.edu (e-mail). Once eligibility has been determined, students register with Disability Resources every semester to activate their approved accommodations. Although a student may request an accommodation at any time, it is best to initiate the application process at least four weeks before a student wishes to receive an accommodation. Students may begin the accommodation process by submitting a self-identification form online at <https://nau.edu/disability-resources/student-eligibility-process> or by contacting Disability Resources. The Director of Disability Resources, Jamie Axelrod, serves as NAU's Americans with Disabilities Act Coordinator and Section 504 Compliance Officer. He can be reached at jamie.axelrod@nau.edu.

RESPONSIBLE CONDUCT OF RESEARCH

Students who engage in research at NAU must receive appropriate Responsible Conduct of Research (RCR) training. This instruction is designed to help ensure proper awareness and application of well-established professional norms and ethical principles related to the performance of all scientific research activities. More information regarding RCR training is available at <https://nau.edu/research/compliance/research-integrity>.

MISCONDUCT IN RESEARCH

As noted, NAU expects every student to firmly adhere to a strong code of academic integrity in all their scholarly pursuits. This includes avoiding fabrication, falsification, or plagiarism when conducting research or reporting research results. Engaging in research misconduct may result in serious disciplinary consequences. Students must also report any suspected or actual instances of research misconduct of which they become aware. Allegations of research misconduct should be reported to your instructor or the University's Research Integrity Officer, Dr. David Faguy, who can be reached at david.faguy@nau.edu or 928-523-6117. More information about misconduct in research is available at <https://nau.edu/university-policy-library/misconduct-in-research>.

SENSITIVE COURSE MATERIALS

University education aims to expand student understanding and awareness. Thus, it necessarily involves engagement with a wide range of information, ideas, and creative representations. In their college studies, students can expect to encounter and to critically appraise materials that may differ from and perhaps challenge familiar understandings, ideas, and beliefs. Students are encouraged to discuss these matters with faculty.

NAU Syllabus Template elements: Last revised January 6, 2021 | Colin Orion Chandler Syllabus January 10, 2021