

Syllabus For Astr 202

Welcome to Astronomy 202

Life in the Universe

Fall 2013, section 2 (Honors)

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(when emailing please add Astr 202 in the subject line)
Office hours MW 1-2 PM

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Introduction to the Course

This course satisfies the Natural Sciences Tier 2 requirement and is intended for non-science majors in the honors college.

In this course we will explore how the Universe, Sun, and Earth were formed. How the first life on Earth started. How this life evolved into complex multi-celled species. We will outline what appears to be the necessary conditions for life to exist and thrive. We will study where in our solar system there could be life. We will learn about other planets outside our solar system orbiting other stars. We will examine these new worlds for possible habitable zones. We will also estimate how likely it is that we could communicate with another intelligent civilization, and how such communication could be possible. We will also examine issues such as space travel, terraforming, and the evolution of civilizations. **The emphasis of the course is on understanding**, not on pure memorization.

The class will be divided into pairs of students. Each pair of students will carry out an exciting observing project with a real telescope that they will be given later in class.

Background Preparation

Prerequisites: either NATS 102 or NATS 101 or Astr 170A, B, or C. Students that have not taken a tier 1 science course might have difficulty with this material. Students that have taken NATS 102 or Astr 170A or 170B “The Physical Universe” will be more familiar with some of the material in this course, but it is not required to

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take "The Physical Universe" before this course. You must be in the Honors College to be in this section.

The concepts of simple geophysics, basic chemistry, and astronomy are fundamental to understanding the information presented in this course. *If you have not been exposed to these concepts before, you must study them immediately in a general textbook like that used at the NATS 102/170B level. You should also be familiar with very basic algebra, trigonometry, fractions, and scientific notation.* This course will also require frequent reading and discussion of popular science articles, as well as independent research. **A strong interest in the course material is the best prerequisite!** You should have a small inexpensive calculator at your disposal (one that does powers, roots, and trigonometric functions). *Please seek help in-class when you encounter a concept that you do not understand.*

Textbook

The textbook for this course is the course guide for Prof Close's "Life in Our Universe" that also has a set of 24 high-quality lectures on a set of DVDs. All available for purchase from the Great Courses website. *Students that are enrolled in Astr 202 can purchase these DVDs at a much reduced rate – written instructions on how to do this will be given first day of class.* You must order these DVDs to attend this class. **These lectures will form the core lectures of the course. Students are expected to watch the relevant lecture and complete the lecture assignment before coming into class.** This assignment is due at the very start of class (no late assignments will be accepted). In this manner class time will be used to help you really learn the material at a deeper level with personal help "coaching" from the Professor and the TA (unlike what is possible in your other large classes at Arizona).

Evaluation

Your grade in this course will strongly depend on your participation in class. The exact breakdown is: observing project (20%)
your performance on the Monday/Wednesday homework exercises (20%)
and Friday in-class homework/quizzes (20% in total),
midterm exam (15%),
the final exam (25%).

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Both exams are closed-note and will consist of multiple-choice and short written answer questions. Your grades will be available always throughout the course off the "desire-to-learn" D2L server (logon from student link). The final course grades:

≥90% of the total number of points available you will receive an A,

≥75% B,

≥60% C,

≥50% D,

below 50% an E.

Group Project

The observing project will be detailed later in the semester.

The grades for this project will be based on mainly on individual effort. Students that do not help their group (or use copied text in their work without quotations and citations) will be awarded a grade of Zero. Grades will be strongly based on the individual projects and the observing work and report. However, a great team effort will typically increase your grade.

Policies

- *Do your own work.* Modern science is collaborative, and people learn from talking to each other. Feel free to talk to the instructor, TA, or other students about homework assignments. But the work you turn in must be your own -- **don't ever copy assignments**. Copying is cheating and will be handled according to university policies. The instructor subscribes to the University's Code of Academic Integrity:
http://deanofstudents.arizona.edu/sites/deanofstudents.arizona.edu/files/code_of_academic_integrity.pdf for more info. The Code prohibits all forms of academic dishonesty, including cheating, plagiarism, and facilitating dishonesty by others. The repercussions for all of those found guilty of violating the Code will include loss of credit for the work (grade=0) and may include failure of the course or more extreme measures as needed.
- *Attendance, participation, and conduct.* Attendance and participation in class and in your group are an important part of your class grade. **Students who are absent will have difficulty passing this course -- attendance of all the classes is critical in this class since it is the in-class work that counts for most of your grade.** You must participate in class by asking questions. Eating or drinking is not permitted in the lecture hall. Talking is also prohibited unless you want to ask a question during lecture or unless you are preparing a presentation with your group during the discussion sessions. People talking during lectures will

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be asked to leave. *No cell phone use, reading newspapers, or surfing the web allowed during class. Students that break these rules will be asked to leave.*

- *Late Assignments. No credit, WITH NO EXCEPTIONS, will be given for late work.* Because we want to be fair to those that turn in work on time, we will not accept late work. The “lecture homework” is due at the start of class – no late work will be accepted. There is an absolute deadline for homework. If you are concerned about not being able to turn in your work, feel free to turn it in early! We will accept homework at any class meeting prior to the deadline. Please do not email homework, only paper copies will be graded (do not email homework it will not be graded). Your lowest assignment and lowest homework will be dropped from your final grade.
- *Missed Tests. No makeup tests, WITH NO EXCEPTIONS, will be administered.* The exams are already scheduled and posted on the class schedule. If you know that you will miss a test (before the test), you must make arrangements (for valid reasons) for an oral exam at a time and date prior to the written test. Missing the midterm exam is an automatic loss of 15% of your course grade. Missing the final is a loss of 25%.
- *Extra credit observing assignments.* No extra credit in this section.
- *Students requiring special accommodation* in testing or note taking must notify Prof. Close and must deliver to Prof. Close the Disability Resource Center faculty letter within the first few days of the course
- *Grading.* You have one week from the time an assignment or exam is returned to challenge any perceived errors. Although rare, there are occasions when grading errors occur, and you should review your returned work.

Web Site

The course website in on D2L it includes the most recent course syllabus, special announcements, and other course materials.

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HOW TO ORDER THE TEXTBOOK AND DVD --- Must be done on Monday Aug 26, 2013

You will now be able to receive the requested course "*Life in Our Universe*" on the DVD format for \$69.95. The rate will run through December 20, 2013. To receive this discount when placing their order,

Dial 1-880-832-2412 , mention "Professor Laird Close" and the Priority Code 86247, and a representative will be happy to assist them.

If you have any further questions, please call Customer Care at [1-800-832-2412](tel:1-800-832-2412). Our office hours are from 9 am to midnight ET Monday through Friday and from 9am to 5pm ET on Saturday and Sunday.

Regards,

Laura

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