AST 105-7T Extraterrestrial Life -- Fall 2003

Course Syllabus

Instructor: Prof. Perry Gerakines **Office:** Campbell Hall, room 383

Office Hours: Tuesday & Thursday 1-2pm (other times by pre-arranged appointment only) **Telephone:** 934-8064 **Email:** gerak@uab.edu

Lecture: Sunday from 5:30-8:00pm in CH 301 **Website:** www.phy.uab.edu/~gerakine/ast105.html

Course Topics:	• the general nature of the Universe as a habitat for life • the nature of life on Earth and how life developed on the Earth • where life might exist elsewhere in the Solar System • where life might exist in other parts of the Universe, and if it's intelligent, how we might interact with it
Required Materials:	• LECTURE: Attendence is necessary! • TEXTBOOK: *Life in the Universe*, by Bennett, Shostak, & Jakosky.

Exams and Grading Policy:	• Course Grades will be determined by this formula:
	  ○ 60% of grade = performance on in-class Quizzes (1 every two weeks)
	  ○ 30% of grade = performance on Final Exam (comprehensive)
	  ○ 10% of grade = Attendance & Participation
	• Each week, an extra-credit speculation question will be posed in the form of "the question of the week" and will pertain to topics not yet discussed in class.

Cheating policy:	• Any copying out of a book, website, or other person's work will be considered an incident of cheating. *This applies to all work you hand in to me*.
	• The following procedure will be used when an incident occurs:
	  ○ 1st offense: no credit for that paper.
	  ○ 2nd offense: no credit for that section of the course.
	  ○ 3rd offense: you will receive an F for the course and be turned in to UAB for academic misconduct (for which you will likely be expelled).
	• You are expected to know UAB's policies on academic conduct, and if you haven't read UAB's Academic Honor Code or Non-Academic Conduct policies, then I suggest you do so now. It may be found in the 2003-2004 UAB Undergraduate Catalog.

Suggested additional reading:	• The *New York Times' Science Times* section published every Tuesday; costs $1. • *Sky & Telescope* magazine; monthly; costs $4.99 per issue; also can be found in the UAB Sterne Library. • www.nasa.gov; www.space.com; setiathome.berkeley.edu; www.seti-inst.edu

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AST 115 – Extraterrestrial Life Lab

Lab Hours: Wednesday 5:30pm - 8:30pm
Location: CH461
Instructor: Erik Saperstein
Office: CH355 (or the Astrophysics Lab in CH379)
Office Hours: by appointment
E-mail: esaper@phy.uab.edu

Content

- The demonstrations conducted in the labs will follow, as closely as possible, the progress of the lectures (AST 105).
- All demonstrations will be preceded by a discussion of the relevant ideas, and expressed in the context of topics introduced in the lecture.
- The demonstrations themselves will consist of observations of phenomena pertinent or related to the lecture material. These are not experiments, but *experiences*. The intent of the lab is to familiarize you with the ideas and methods presented in the demonstrations.
- The demonstrations will be followed by a brief review and discussion of your observations.

Grade

- 96% of your final grade will be determined by lab reports. All 12 reports will contribute equally to the final grade and be worth 8% each.
- The remaining 4% of your final grade will be determined by participation and attendance.
- An additional 3% extra credit will be awarded to each report with "adequate speculation". See the Reports section on the back of this syllabus for details.

Copying information from a book, web site, someone else's report, or any other source, into your report without citation is considered **cheating**. This pertains to sentences as well as pictures and illustrations. Quoting short passages is OK, but you must include references, that is, you must tell me whence the passages came.

Instances of cheating will be handled as follows:

- First Offense - No credit on the report
- Second Offense - No credit on the report and no participation/attendance credit

- Third Offense – An F for the course and you will be turned in for academic misconduct

Reports

- A lab "report" will be due each week, based on the discussion and your observations from the previous demonstration.
- Your report must contain your name, the date on which the lab occurred, and the name of the lab. This information should be supplied in the top margin of the first sheet of your report.
- The sections of the report should include:
  - An **introduction** with a brief review of the discussion
  - An **experimental** section describing the equipment used and methods followed in the lab
  - A description of your **observations**
  - A **conclusion** in which the observations are *interpreted* with respect to the discussion
  - (Extra Credit) **Speculation** about how to resolve an issue raised in the review after the observations

  Note that the conclusion is NOT a restatement of the results or observations, but an interpretation of the results. In other words, what do the data mean? How were they used to arrive at your results? What assumptions, if any, were needed to make your results meaningful?

  At the end of each lab, I will ask you to consider an issue related to the lab just completed. If you speculate about how this issue might be resolved, and include your thoughts and a resolution to this issue in your report, you will earn an additional 3% for that report. Do not worry about getting the right answer! Incorrect or faulty reasoning will still receive the same 3% as a correct or reasonable answer. You may, and in fact I encourage you, to study for the introduction and conclusion of the report, but for this issue I would like you to speculate, i.e. think freely, not study. If you merely answer the question, but do not include your thoughts, you will only earn an additional 1% for that report. Here, your *reasoning* is more important than your solution.

- The length of each report should be **at most 2 or 3 pages**. Don't concentrate on the length of the report. Focus on the *content*. As long as the report correctly contains all of the relevant information discussed in the lab, it will receive

full credit, even if it is only 1 or 1 ½ pages long; however, the report must be *complete*.