

Life in the Universe / ASTR1420E

Summer 2025

Instructor Contact

Instructor: Prof. Inseok Song

Office Hours: N/A

E-Mail Address: song@uga.edu

E-Mail Answering: 9–11AM (and/or 6–8PM) Mon through Fri

Meeting Time, Room, and mode of Teaching

100% asynchronous online. All course material (including two exams) will be delivered through eLC.

This course is structure such that lecture notes (as embedded Google Slides) are released in a timely manner and you need to study through the lecture notes by yourself. On each workday, you should finish a lecture note, quiz, and/or homework.

At the end of each major chapter or module, I will upload a short video summary on the covered important concepts. These video summaries should be taken as a general guideline not to be taken as a complete study guide. You need to study all lecture notes thoroughly to achieve "good" scores in exams.

Course Description

This course is for you to understand the origin of life in the Universe and to scientifically estimate the likelihood of life in the Universe. As a formal course, it is inevitable for me to ask you to memorize a few important concepts, terms, facts, etc. However, I try to minimize the need for you to memorize minuscule details. What I hope is that, by the end of this semester, you can place the human in the cosmological context and appreciate the precious nature of our human civilization in the vast Universe. If this course can provide you a chance to ponder on what we need to do to preserve our "Blue Dot", I will take that as a success!

Course Goals

- Know the difference between science and pseudo-science and perceive astrobiology as a science field
- Understand the chemical and biological origin of life
- History of life on the Earth
- Can describe various exoplanet detection methods
- Apply Drake's equation to estimate the number of intelligent alien civilizations in our Galaxy
- Understand the Fermi Paradox and explain possible solutions to the paradox
- Can critically assess various claims of alien phenomena (e.g., UFOs, ancient astronauts, etc.)

- Understand the intrinsic limits for space travel and the need for space colonization
- Understand the importance of protecting the Earth Environment

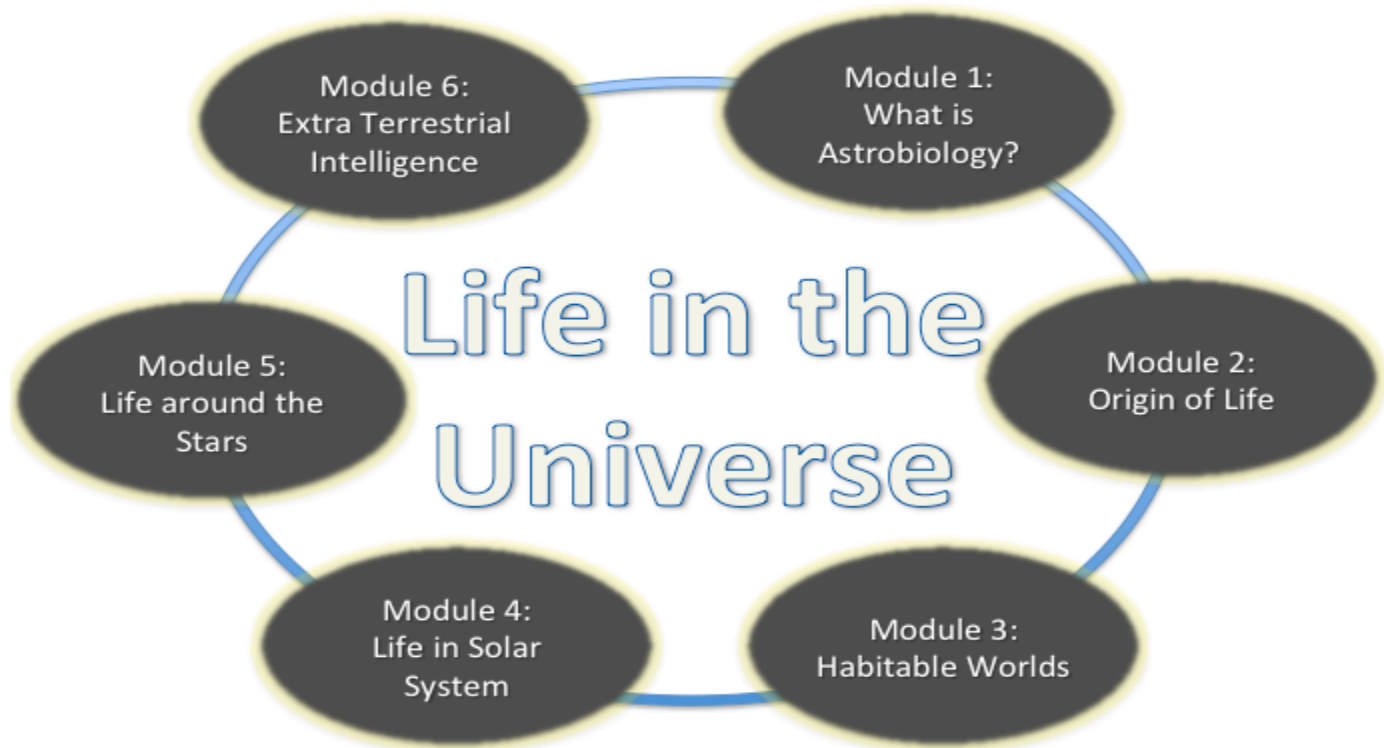
Textbook

OpenStax "Astronomy" Textbook ([Free Astronomy Book for Download – OpenStax](#)), ISBN ISBN-13: 978-1-951693-50-3

Prerequisite

None

Course Outline



Missed Assignments/Make-Ups

Quizzes and homework are due in **3 workdays** from the assignment. Therefore, it is **very important to keep up** with the pace of the course.

If you are traveling, make sure you contact me BEFORE your travel to arrange a different due date.

If you expect a short(!) duration of absence which will affect your ability to submit homework/quizzes, contact me in advance as well.

1. Quizzes have a limited number of trials (max number of trials is 5). More than 50% of quiz questions will be repeated in exams.
2. There is no make-up test! Each exam will be available over two days, and you can take the exam at your own convenient time. However, once you start a test, you have to finish it in a continuous manner because it is a time-limited, open-book test. You cannot pause the test and resume it at a later time. **Make sure to start the exam about 2 hours before the end time!** If you have a special circumstance, discuss it with me **well.in.advance**.
3. The course is structured so that any student who keeps up with the work and actively participates in the course should do well.
4. The final exam is accumulative (covering all topics mentioned in the class).

Evaluation and Grading

1. Two open-book tests (mid-term and final) – 50% total
2. Homework (short reports) – 15%
3. e-portfolio – 10% (click [here](#) for the description of e-portfolio)
4. Participation – 5% (regular logins, on-time progress, etc.)
5. SETI debate – 5%
6. Online Quizzes – 15%

The above grading fractions are tentative, and the final grading fractions will be announced before the mid-point of the semester..

Your final course score will be scientifically rounded (i.e., 89.5 \rightarrow 90, 89.4 \rightarrow 89), and using the final rounded score, letter grades with +/- are assigned as follows.

	$87 \leq B+ < 90$	$77 \leq C+ < 80$	$60 \leq D < 70$	$F < 60$
$A \geq 90$	$83 \leq B0 < 87$	$73 \leq C0 < 77$		
	$80 \leq B- < 83$	$70 \leq C- < 73$		

Attendance Policy/Expectations of Participation

1. Log in to the course homepage at least once each weekday.
2. Actively participate in the discussion boards by posting and responding to other students each weekday.
3. When I receive a plea to reconsider a grading, I look at all these login history and discussion participations holistically.

Disability Statement

UGA is committed to the success of all learners, and we strive to create an inclusive and accessible online environment. In collaboration with the Disability Resource Center (<http://drc.uga.edu/>), we work with students who have documented disabilities to access reasonable accommodations and academic supports.

For more information or to speak with a Disability coordinator, please call the Disability Resource Center at (706)542-8719, TTY only phone (706) 542-8778.

Copyright

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Technical Issues

For TECHNICAL PROBLEMS with eLC or other issues, contact: UGA's Enterprise Information Technology Services (EITS) Help Desk at 706-542-3106, or email at helpdesk@uga.edu. You can also submit a helpdesk request online at <https://eits.uga.edu/support/request>.

Additionally, there will be a forum in the online course for students to post any issues or concerns. *(Including a forum for technical issues can be a great way to help your students and encourage them to help each other.)*

Academic Honesty

Academic honesty is very important, and I take it very, very seriously.

In the previous semesters, I have witnessed several plagiarism cases in homework and exam answers. When I find any potential academic dishonesty issue, I plan to report it to the University.