

# Life in the Universe / ASTR1420

## Spring 2019

### Instructor Contact

Instructor: Inseok Song

Office/Telephone: 706-542-7518

Office Hours: 1 hour after the class (or by an email appointment)

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### Meeting Time and Room

TuTh 12:30PM - 1:45PM, Room 221 in the Physics Building

### Course Description

This course is for you to understand the meaning of Life in the Universe and to estimate the likelihood of life in the Universe scientifically. As a formal course, it is inevitable for me to ask you to memorize a few important concepts, terms, facts, etc. However, I am trying to minimize the need to ask you memorize minuscule details. What I hope is that, by the end of this semester, you can place the human being in the cosmological context and appreciate the precious nature of 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 precious "Blue Dot", I will take that as a success!

### Course Goals

- Know the difference b/w science and pseudo-science and perceive astrobiology as a science field
- Understand 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

### Textbook

"Life in the Universe", 4th Ed. by Bennett & Shostak

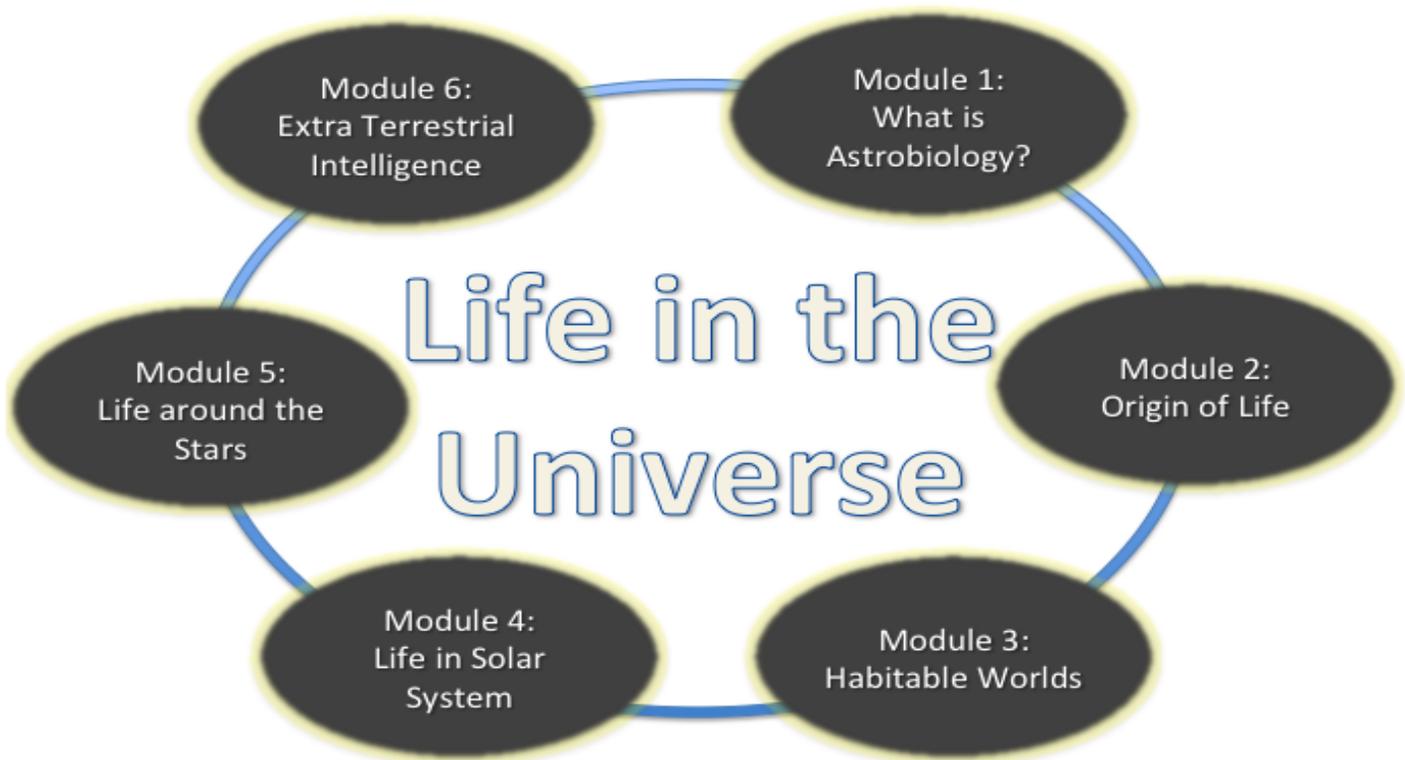
The above textbook can help but it is not necessary to keep up with the class progress. About 1/3 of the course material is composed of topics that I have personally compiled over many years. For each lecture, lecture note will be provided through eLC.

## Prerequisite

None

## Course Outline

28 topics in six modules



## Missed Assignments/Make-Ups/Extra Credit

1. Quizzes due usually one week from the posting date and there will be a limit on the number of retries (N=5). **More than 50% of quiz questions will be repeated in exams.**
2. **There is no make-up test!** If you have a special circumstance, discuss with me well in advance.

3. The course is structured so that any student who keeps up with the work and participates actively will do well.
4. Homework will be assigned throughout the semester, and there will be occasional bonus credit works as well. These need to be submitted through eLC.

## Evaluation and Grading

1. Three in-class exams (non-accumulative) – 80% total
2. Quizzes (through eLC) : 15%
3. Online group debate on SETI : 5%
4. Bonus credit work : up to +5%

With the final score scientifically rounded (i.e., 89.5 --> 90, 89.4 --> 89), based on 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

Attendance will not be tracked, however, bonus credit works are "secretly" given only during the class. Also, I have a habit of "hinting" exam questions when the class attendance is low. :-)

## Disability Statement

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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.

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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](mailto:helpdesk@uga.edu). You can also submit at 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.)*