INSTRUCTOR: Dr. Charles M. Telesco  
Office: Bryant Hall, Room 211E (4-story building across from Hub)  
E-mail: telesco@astro.ufl.edu  
Telephone: (352) 294-1874

LECTURE TIME: Tues, period 7 (1:55-2:45 pm) & Thurs, periods 7&8 (1:55-3:35 pm)

CLASSROOM: (FLORIDA GYM) FLG 270

OFFICE HOURS: The hour after class or (better) by appointment

CLASS WEB SITE:  


PRE-REQUISITES AND CO-REQUISITES: None, although basic high school math skills (algebra & trig) are assumed.

COURSE DESCRIPTION: This course offers an interdisciplinary approach to the study of the origin and evolution of life on Earth, the possibility of life beyond our planet, and the social and ethical implications of discovering extraterrestrial life. The course will focus on major scientific developments in biology, paleontology, chemistry, geology, and astronomy to help us understand the nature and possible distribution of habitable environments in the Universe. Along the way, we will learn scientific inquiry and use and practice critical thinking skills to gain new understanding of the dynamic nature of scientific discoveries.

Following the course textbook, the course is organized into four sections:
• Introducing life in the Universe and the nature of science
• Life on Earth
• Life in our solar system
• Life beyond our solar system

GENERAL EDUCATION (GenEd):
1. Objectives for Physical Sciences  
http://gened.aa.ufl.edu/subject-area-objectives.aspx

“Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.”

2. Student Learning Outcomes  
http://gened.aa.ufl.edu/student-learning-outcomes.aspx
3. Course GenEd Learning Objectives & Outcomes

- **To provide students with an overview of the emerging field of astrobiology.** This will be accomplished through weekly reading assignments, in-class lectures, and discussions as well as several projects distributed across the semester. Students will be able to explain basic concepts and theories that are fundamental to astrobiology.

- **To teach students the scientific process and how we can understand the Universe using basic physical laws derived on Earth.** This will be accomplished through discussions and projects. These projects guide students through the process of doing scientific research so that students can gain an understanding of how the scientific method is applied to the field of astrobiology.

- **To review the major scientific developments in the search for life in the Universe and summarize their impacts on society.** Students will be able to critically evaluate the difference between the early philosophical ideas about extraterrestrial life and the science of astrobiology. In a similar way, students will learn to differentiate science from pseudo-science.

- **To promote thinking about the dynamic relation between life and its environment and how changing planetary atmospheres and climates alter the necessary conditions for habitability.** Students will formulate empirically testable hypotheses about the habitability of a discovered exoplanet.

- **To improve scientific literacy.** Literacy in the basic concepts and terminology of science is necessary if they wish to follow science stories in the news or make informed decisions (such as voting) on issues that pertain to science. Students will have to evaluate the science and social impact of current news related to astrobiology.

- **To help students learn to communicate scientific ideas clearly and effectively using written or graphic forms.** This will be done through discussions and as the written component of the projects.

**GRADING:** A minimum grade of C is required for general education credit. See [https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx) for general UF grading policies. Your grade for the course will be based on the following:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>3 Exams – (25% each)</td>
<td>75%</td>
</tr>
<tr>
<td>1 Report</td>
<td>20%</td>
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<tr>
<td>1 Assignment – (5% each)</td>
<td>5%</td>
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GRADING SCALE:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>% Points</th>
<th>GPA</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>&gt;89</td>
<td>4.00</td>
</tr>
<tr>
<td>A-</td>
<td>87 - 89</td>
<td>3.67</td>
</tr>
<tr>
<td>B+</td>
<td>84 - 86</td>
<td>3.33</td>
</tr>
<tr>
<td>B</td>
<td>80 - 83</td>
<td>3.00</td>
</tr>
<tr>
<td>B-</td>
<td>77 - 79</td>
<td>2.67</td>
</tr>
<tr>
<td>C+</td>
<td>74 - 76</td>
<td>2.33</td>
</tr>
<tr>
<td>C</td>
<td>70 - 73</td>
<td>2.00</td>
</tr>
<tr>
<td>C-</td>
<td>67 - 69</td>
<td>1.67</td>
</tr>
<tr>
<td>D+</td>
<td>64 - 66</td>
<td>1.33</td>
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<tr>
<td>D</td>
<td>60 - 63</td>
<td>1.00</td>
</tr>
<tr>
<td>D-</td>
<td>57 - 59</td>
<td>0.67</td>
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<tr>
<td>E</td>
<td>&lt; 56</td>
<td>0.00</td>
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Your actual final grade will be no lower than on this scale, which may be curved based on the overall performance of the class. Exams will use the above scale in the form of percentages. Thus, an exam with a total point value of 33, a score of 29/33 = 88% = A-.

EXAMINATIONS (75% OF GRADE): There will be three in-class exams during the semester plus one optional cumulative final exam (Test 4) during the final-exam period. Each exam accounts for 25% or your course grade. If you choose to take all four exams, then only the three best scores will be used to compute your course grade. Keep in mind, however, that each in-class exam covers a limited number of chapters, whereas the optional final is comprehensive (i.e., it covers all the course material) and occurs on Friday, December 16.

The approximate dates of the in-class exams are Tuesday, September 27 (covering Chapters 1-4), Tuesday, October 25 (covering Chapters 5-8), and Tuesday, December 6 (covering Chapters 9-13). In-class exam dates will be finalized at least a week prior to the exam. Therefore, do not use these estimated exam dates in this document to plan vacations, etc. Any changes to the in-class exam dates will be announced in class. Please do not email me requesting exam dates or inquiring about schedule changes. Not knowing about an announced and posted schedule change or forgetting the exam date are not valid excuses for missing an exam, and make-ups will not be granted in such cases. Make-up exams will only be granted for documented medical or family emergencies. The UF-designated time and date for the optional comprehensive (covering all chapters, 1-13) final exam, Test 4, are 12:30-2:30 pm, Friday, December 16 (exam code 16C). If you skip Test 4, your course grade will be based on Tests 1, 2, and 3. All tests will be in the regular classroom.

REPORT (20% OF GRADE): A written report will be required for this course to support the GenEd learning objectives and outcomes. The topics, expected content, format, and deadlines of this report will be described in class.

ASSIGNMENT (5% OF GRADE): There will be one homework assignment in this course. This will be discussed in class. The assignment is worth 5% of your grade.

ATTENDANCE, CLASS PARTICIPATION AND CONDUCT POLICY:

- Attendance at lectures is expected, although not required.
- Students should arrive on time and not get ready to leave until the lecture is finished.
- Students are expected to not engage in any activity during class that is distracting to yourself or your fellow students or detrimental to your/their ability to learn. Therefore, use of laptops, tablets, and smartphones is not permitted during the lectures (except in cases of documented medical necessity), except as follows: You may use your laptop only for note taking (not web-surfing or checking e-mail) and only if you sit in the first or second row of the classroom. Use of laptops is not permitted anywhere else in the classroom. If this privilege is abused, then it may be revoked during the semester.
- Please be courteous to the instructor and your classmates by silencing your mobile
phone before the start of class, and by not texting during the class period.

- Students are expected to read the material in advance of the lectures and be ready to participate in class. *Lectures and associated PowerPoints are not provided on-line.* All key material presented in the lectures is also covered in the textbook, so it is recommended that you not try to copy or write down all the Powerpoint materials: just listen to the lecture and try to absorb the materials during the presentation.
- Students are encouraged to participate in class by asking questions and commenting on the lecture or related topics.

**MAKE-UP POLICY:** Students are expected to complete all requirements by the specified due dates. If a student misses class due to an excused absence as specified in the undergraduate catalog and provides the instructor with timely notification, they will be allowed a reasonable time to make up the missed work. The format of a make-up test/exam will be at the discretion of the instructor and may not be identical to that given in class at the formally scheduled time.

**ACADEMIC HONESTY POLICY:**
- This is an excerpt from the Academic Honesty Guidelines and Student Conduct Code in the University of Florida Undergraduate Catalog: “*Academic Honesty:* The University requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge are diminished by cheating, plagiarism, and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the University will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff, and administrators who practice dishonest or demeaning behavior."
- Cheating is not tolerated in this class. Everyone in this class is expected to follow the University of Florida Honor Code: *We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.* Any student caught cheating will be referred to the Honor Code Chancellor.
- On all work submitted for credit by students at the University, the following pledge is either required or implied: "*On my honor, I have neither given nor received unauthorized aid in doing this assignment."

**ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES:**
- Students who require a classroom accommodation for a disability are required to arrange accommodations with the Disability Resource Center.
- Students must first contact the Dean of Students Office of Disability Resources in Peabody 202 (phone: 352-392-1261). Please see the University of Florida Disability Resources website for more information at: [http://www.dso.ufl.edu/drp/services/](http://www.dso.ufl.edu/drp/services/).
- The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

**UF COUNSELING SERVICES:** On-campus resources are available at the UF Counseling & Wellness Center (392-1575) for students experiencing personal or stress related problems.