

BIO1058 Biology, Origins of Life

Course Syllabus

COURSE REQUIREMENTS

Biology, Origins of Life is an introductory course. All students are eligible to enroll in this course.

COURSE DESCRIPTION

This course probes the smallest unit of life-the cell. The design and responsibilities of cells will be investigated. The course looks at how DNA is organized and what function it serves. What data is safeguarded in a DNA strand, why DNA is important and how it is used in science today will be explored.

You will be astonished to unearth how these very small components, cells and DNA strands, are so very vital to life and individuality. You will increase your awareness of how DNA strands can be damaged and refurbished.

LEARNING OBJECTIVES

You will manifest understanding of basic cellular format and operation. You will gain an expansive knowledge of basic biology and some genetic awareness. By the end of the course all students should:

- Recognize the various components in a cell
- Secure a knowledge of how cells work
- Reveal how DNA is significant to life
- Amass an elementary grasp of how DNA determines features of a person
- Clarify how DNA that is damaged gets repaired
- Meditate deeply about how awe-inspiring life is and it works so well with other life forms
- Ponder the importance of cells to our lives and how they rebuild themselves

ATTENDANCE

Attendance is mandatory for all students. Excellent attendance is imperative for mastery and application of the information dispensed. Whether you are sitting at a desk in a classroom or attending via Skype, your attendance is vital to your success. Late arrivals are distracting and disrespectful. Please refrain from being tardy.

Grades will be affected by absences and tardiness. Participation in class is a prerequisite. You learn from lectures, discussions and presentations.

CLASSROOM BEHAVIOR

Students are expected to treat all persons with respect. We should all conduct ourselves in a courteous and responsible manner. Be considerate, you can disagree, don't insult.

Please set all your electronic devices to silent during class so as not to be a disturbance to others in the class.

TUTORIAL ASSISTANCE

We maintain an open-door policy for our students. We are absolutely willing to discuss any matter that may arise during the course. If you have any questions, problems, or need help with the course material, we urge you to reach out as soon as the issue arises. If you want to contest a grade, you must do so within 48 hours and put it in writing. Please ask your student advocate for help. If you do not have a student advocate send an email to: tutordept@usilacs.org.

NON-DISCRIMINATORY STATEMENT

All students regardless of age, race, gender, religion, physical disability, class, etc., shall have equal opportunity without harassment in this course. Any problems with or questions about harassment can be discussed confidentially via email at: hr@usilacs.org.

DRESS CODE

For students enrolled who are attending in a classroom or via Skype, please be sure you are dressed modestly and respectfully. Please refer to www.merriam-webster.com/dictionary/business%20casual. NO short shorts or skirts. Avoid low-cut tops. We want to present ourselves in a dignified manner at all times.

NETIQUETTE

- Always read through all the comments of the class before responding. This will avoid duplicating comments or questions asked.
- Avoid language that could be offensive. All profanity is strictly prohibited. Remember that using all caps when replying online signifies shouting. This would be rude and combative.
- Be sensitive to the fact that there will be fellow students from all parts of the world with many differing backgrounds and languages. Remember that slang and idioms will most likely be misconceived and/or misinterpreted. These should be avoided.
- Respect others views or opinions.
- Be thoughtful of the privacy of others. Ask permission before sharing email addresses or other personal information.
- Do not forward inappropriate material such as: virus warnings, chain letters, jokes, etc. The sharing of pornographic material is strictly prohibited.
- Use good spelling and grammar. Avoid using texting shortcuts.
- Strive to compose your comments in a positive, supportive and constructive manner at all times.

Any of these offenses will be dealt with by the school disciplinary committee.

ADA ACCOMMODATIONS

All reasonable accommodations will be provided for students with disabilities. Any student attending USILACS who needs an accommodation due to a chronic challenge (i.e. blindness, deaf or hard of hearing, mobility issues, psychological, or learning disability), register with:

USILACS Registrar's Office
1221 Brickell Ave.
Miami, FL 33131
1-305-330-2202
registrarsoffice@usilacs.org

ACADEMIC DISHONESTY/CHEATING

We encourage collaborating with others, either in person or online, to study and learn. When you complete your assignments or your exams, however, the wording has to be your own.

Plagiarism is the theft of someone else's work and ideas. You are permitted to cite or even quote someone else, however, you must properly cite them. There are two accepted ways of doing this. They are known as Modern Language Association (MLA) or American Psychological Association (APA). You can visit www.citationmachine.net for help in correctly citing information.

As a school that strives to maintain high moral standards, we strongly caution our students to be ethical and honest. Endeavor to be honest in conducting yourself in regard to any coursework you accomplish or exams you may take. Cheating is a dishonest practice.

REFERENCE MATERIALS

The vast majority of textbooks are outdated by the time they are published. USILACS education programs are not based upon outdated printed textbooks. USILACS programs are based on the most accurate and reliable knowledge available; specifically, up-to-date vetted internet-based information.

For those who would like some reference or Internet search recommendations, we would recommend the following.

- (2018) Basic Cell and Molecular Biology 3e: What We Know & How We Found Out. Bergtrom, George. University of Wisconsin.
- (2013) Concepts of Biology. Multiple Authors, OpenStax. OpenStax.
- (2001) Scientific Methods: an online book. Jarrard, Richard. University of Utah.
- (2016) Biological Levels in Biology: The World Tour by Amoeba sisters
- (2016) Introduction to Cells: The Grand Cell Tour by Amoeba sisters
- (2015) Overview of Animal and Plant Cells

MINIMUM REQUIRED SUPPLIES

All students will need all of the following:

- Computer with camera, microphone, and speakers.
- Skype installed on the computer with an active Skype account.
- Internet
- Printer
- Notebook paper
- Pens/pencils

If the student does not have a computer or internet, there will be some available for use at the school in the computer lab.

GRADING SYSTEM

There will be three tests throughout the course. Each test will count for 33.3% of the final grade.

Grade	Percentage	Grade Point
A+	99	4.0
A	97	3.8
A-	94	3.7
B+	89	3.3
B	85	3.0
B-	81	2.7
C+	77	2.3
C	73	2.0
C-	69	1.7
D	66	1.0
F	59	0.0

All students must earn at least a “D” in order to pass the class.

ASSIGNMENTS

Symbiotic Relationship Essay-

Research a pair of beings or life forms that form a symbiotic relationship. Describe how the relationship benefits each of the parties individually. Relate how it benefits the ecosystem as a whole. Tell what you specifically learned that may have been new or surprising. Did your investigation raise any other questions in your mind? How do you feel about what you learned? This essay should be at least 1,000 words.

Diagram of animal and Plant Cell-

Draw each cell, preferably side by side, for ease of comparison. Highlight the similarities and the differences.

Build a DNA strand-

Use your imagination in coming up with the materials you would like to use to build a DNA strand. After building the strand, label each area.

WEEKLY ASSIGNMENTS

Week 1	Overview of course and coursework The Cellular Foundation of Life (1)(2013)
Week 2	Ecology (6)(2013)
Week 3	Animal Structure and Function (5)(2013)
Week 4	Cell Division and Cell Life (19)(2018) <i>Symbiotic Relationship Essay due</i>
Week 5	<i>Video review and Exam</i>
Week 6	Cell Tour, Life's Properties and Evolution, Studying Cells (1)(2018)
Week 7	The Cytoskeleton and Cell Motility (18)(2018)
Week 8	Cell Division and Genetics (2)(2013) <i>Diagram of Animal and Plant Cells due</i>
Week 9	<i>Video review and Exam</i>
Week 10	DNA Structure, Chromosomes, and Chromatin (8)(2018)
Week 11	Details of DNA Replication & DNA Repair (9)(2018)
Week 12	Transcription and RNA Processing (10)(2018) <i>Model of DNA Strand due</i>
Week 13	<i>Video review and Final exam</i>