

Biology 1114 – General Biology Syllabus Cover Sheet

CRN 24273 (TR 5:30 -7:20 PM)



Professor: Dr. James (Jim) Enderby Bidlack

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Office Hours: MTWR 12:00 -12:50 PM and alternate Fridays 3:00 - 5:00 PM

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BIO 1114 - General Biology

This is an introduction to the life sciences as a course to fulfill the general education requirement for non-biology majors. The topics include an introduction to the fundamental principles of biology, the scientific method, cell structure and organization, biological molecules and metabolism, the levels of biological organization and systematics, plant and animal systems, Mendelian genetics, heredity, evolution, and ecology. This course does not have an accompanying laboratory session and does not count towards a B.S. degree in Biology.

Note on University Life Sciences Lab: To take BIO 1211 (University Life Sciences Laboratory), students are required to have taken, or are concurrently enrolled, in the BIO 1114 (General Biology Lecture) course.

BIO 1114 - Objectives of the Course

- To promote science literacy, critical thinking, and the role of science in society through an understanding of the fundamental principles of biology.
- To encourage the student to use the scientific method for problem solving and relate science to everyday life.
- To give students an appreciation for the diversity of life.
- To provide basic knowledge about the structure and function of living organisms.
- To increase awareness of the impacts of human activities on the biosphere.

BIO 1114 - Student Learning Outcomes (SLOs)

- Identify the properties of life.
- Apply the scientific methodology to the study of life and natural phenomena.
- Explain the biochemical processes of life.
- Identify evolutionary processes and supporting evidence.
- Categorize the hierarchy of life.
- Apply biological concepts to societal issues.

BIO 1114 - Transformative Learning (Central Six)

1. Discipline Knowledge: General Biology provides you with an introduction to life around and within you.
2. Leadership: General Biology encourages you to work as guided by the core values of character, civility, and community in a cooperative manner in class and small group settings to learn about stewardship of natural resources and yourself.
3. Research, Scholarly and Creative Activities: General Biology contributes to this theme by helping you learn what scientists do and the scientific method.
4. Service Learning and Civic Engagement: In General Biology, you learn biological concepts related to the world and you will be encouraged to collaborate with student organizations and events to lend a hand in your respective community to help make this a better and sustainable world.
5. Global and Cultural Competencies: During lectures and outside assignments you will gain insight into the diversity of life in the world around you as well as some of the major conservation crises facing all of us. This prepares you to communicate effectively in a complex world, to function in diverse environments, to adapt to a continuously changing global society, and to be a lifelong learner who is aware of the world.
6. Health and Wellness: With vitality and meaning. General Biology introduces you to well-being by discussing diseases that society face.



BIOLOGY 1114

CRN 24273

Spring 2024
Tentative Syllabus

GENERAL BIOLOGY

CRN 24273: TR 5:30 - 7:20 PM

202 HOH (Howell Hall)

<https://bidlack.net/> or <https://www.metabolism.net/bidlack/>
<https://www3.uco.edu/centraldirectory/profiles/2120>

Dr. Jim Bidlack

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GENERAL BIOLOGY: This is an introduction to the life sciences as a course to fulfill the general education requirement for non-biology majors. The topics include an introduction to the fundamental principles of biology, the scientific method, cell structure and organization, biological molecules and metabolism, the levels of biological organization and systematics, plant and animal systems, genetics, evolution and ecology. This course does not have an accompanying laboratory session and does not count towards a B.S. degree in Biology.

<u>Date</u>	<u>Lecture topic</u>	<u>Chapter</u>	<u>Pages</u>
January			
16 T	Introduction, unity and diversity of life	1,7	22-25,34-35,200-203
18 R	Scientific method, chemistry	1,2	28-29,42-53
23 T	Chemistry, biological molecules	2	42-53,54-67
25 R	Biological molecules	2	54-67
30 T	Cell structure, enzymes	3,4	68-83,84-87
February			
1 R	Enzymes, photosynthesis	2,4	84-87,88-95
6 T	Photosynthesis, respiration	4	88-95,96-103
8 R	Additional exam material, molecular biology	1,6	6-7,164-169
13 T	EXAM I , molecular biology	6	140-145
15 R	Protein synthesis, genetic control	6	146-153
20 T	Genetic engineering	6	164-177
22 R	Mitosis and meiosis	5	104-125
27 T	Mendelian and population genetics	5	126-139
29 R	Additional exam material, evolution	7	178-191
March			
5 T	EXAM II , evolution	1,7,8	8-9,178-191, 196-203,204-205
7 R	Viruses, monerans, protistans, fungi, plants	8,9	220-225,226-231

<u>Date</u>	<u>Lecture topic</u>	<u>Chapter</u>	<u>Pages</u>
March (continued)			
12 T	Plant morphology and anatomy	9	232-251 Class Project
14 R	Plant nutrition and transport	1,9	12-13,240-241
19 T	SPRING BREAK		
21 R	SPRING BREAK		
26 T	Additional exam material, animal diversity	10	252-271
28 R	EXAM III , animal diversity	10	252-271
April			
2 T	Human evolution, tissues, systems	10,11	272-273,276-279
4 R	Nervous and endocrine systems	11	300-301,310-313
9 T	Circulation, immunity, respiration	11	288-289,290-295, 296-299
11 R	Respiration, digestion, reproduction	11	280-287,288-289, 304-309
16 T	Human reproduction and development	11	304-309
18 R	EXAM IV , population ecology	7,12	188-189,326-331
23 T	Community interactions, ecosystems	12	332-341
25 R	Biosphere, human impact	7,12	192-193,342-351, 352-357
30 T	Animal and social behavior	7	196-199
May			
2 R	Additional exam material		lecture notes
9 R	FINAL EXAMINATION		

The Final Exam is scheduled for Thursday 9 May 2024 at 5:30 - 7:20 PM.

The Central Six

At the University of Central Oklahoma, we are guided by the mission of helping students learn by providing transformative experiences so that they may become productive, creative, ethical and engaged citizens and leaders contributing to the intellectual, cultural, economic and social advancement of the communities they serve. Transformative learning is a holistic process that places students at the center of their own active and reflective learning experiences. A student's major field is central to the learning experience and is a vital part of the "Central Six." All students will be transformed with [Discipline Knowledge](#), [Leadership](#), [Problem Solving \(Research, Scholarly and Creative Activities\)](#), [Service Learning and Civic Engagement](#), [Global and Cultural Competencies](#), and [Health and Wellness](#).

BIOLOGY 1114 - GENERAL BIOLOGY

Spring 2024 - CRN 24273 • Instructor - Dr. Jim Bidlack

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Avoid Scheduling Office Visits Just Before Class

Textbook: Simon, Eric J. 2019. Biology: The Core. 3rd Edition. Pearson Education, Inc., San Francisco, California, USA.

Attendance: Students are expected to attend, learn, and take notes in all classes. At least three hours of study time should be devoted to each hour of class before and/or after lecture.

Grading: An approximate breakdown of points for the course is as follows:

4 lecture exams @ 100 points each	400
1 final exam @ 100 points	100
Writing assignment @ 50 points	50
Creative project @ 50 points	50
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TOTAL POSSIBLE POINTS	600

Grading scale	Grade	Points needed
90 - 100% of total possible points	A	540
80 - 89% of total possible points	B	480
70 - 79% of total possible points	C	420
60 - 69% of total possible points	D	360
Below 60% of total possible points	F	-

Exam material: At least half of the exam material will come directly from lecture. Other questions may come from readings in the text, end-of-the-chapter questions, or combinations thereof. For best performance, read the assigned text before attending lecture and review lecture notes after each class. Study your notes carefully and review the major topics provided in the text prior to each exam. Sample exams are available at <https://bidlack.net/> and on reserve in the Max Chambers Library. These sample exams should be used as a study guide and not as the sole source for exam preparation.

Exams: Cellular, mobile, and other electronic devices that allow Internet access, or any other communication, must be turned off during exams. All exams will consist mostly of multiple-choice, matching, true-false, short answer, and short essay questions, unless specified otherwise. All exams count in determining the final grade. Make-up exams will be given only in *extenuating* circumstances and will usually consist of long essay questions. **WRITTEN DOCUMENTATION FROM YOUR PHYSICIAN OR UNIVERSITY OFFICIAL MUST BE PROVIDED TO BE CONSIDERED FOR A MAKE-UP EXAM.**

Cheating: All work should be that of the student alone. No communication, notes, or wireless devices are permitted during any exam. If the instructor determines that a student has cheated on an exam or any assignment, the student will receive no credit for that exam or assignment and the student's name will be reported to the proper authorities.

For additional student information that accompanies this syllabus, go to the link on the Internet at:

<https://www.uco.edu/academic-affairs/files/aa-forms/StudentInfoSheet.pdf>