

BIOL 1004
Biological Science
FALL 2007

Dr. Greene/Assistant Professor

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Course Description: Provide a study of the similarity and diversity of life on earth. Lecture three hours, laboratory two hours per week.

Prerequisites: None, this class is a prerequisite for most other BIOL and ZOOL courses.

Required Text: Biology, A Guide to the Natural World, 3rd Edition, by Krough, David, Prentice Hall, Upper Saddle River, NJ 2005

Recommended Text: Guide to Biology Lab, by Rust T.G. Southwest Educational Enterprises

Evaluation and Grading

Students will be tested over information learned in both lectures and labs.

You will be provided with detailed study guides for each test. Tests will consist of multiple choice, matching, and written questions. The final exam will be cumulative, with the majority of the questions covering material after the last test.

- Source of Grades:

Lecture: Your lowest test score will be dropped when determining your final grade. You must take the final exam. You can earn bonus points (4% of test value) any time a test score exceeds your previous test score. You cannot make bonus points on make-up tests.

Written Assignment: You will have a written assignment that consists of reviewing 5 articles. These will be worth the equivalent of a test grade.

Laboratory: In general, each laboratory meeting will be worth 15 points. This will consist of a 5 point quiz over the previous laboratory class and a lab assignment worth 10 points. There will be 2 laboratory tests.

- Grading Scale A = 88-100% B = 78-87% C = 68-77% D = 58-67% F = below 58%

- Weight of individual assignments: Tests are not weighted. They are recorded as points earned, not as a percent of the total.

Learning Objectives/Course Outline

- Institutional Learning Outcomes:

ASU-Beebe is committed to providing students with a broad-based educational experience and focuses, through general education coursework, on five essential learning outcomes: Communication, Critical Thinking, Mathematical Concepts and Application, Scientific Inquiry and Methodology, Society and Self. The learning objectives of all courses are linked to these institutional learning outcomes to ensure that outcomes of individual courses are consistent with the university's institutional goals. These institutional essential learning outcomes can be viewed at www.asub.edu.

Learning Objectives: By the end of the course, students should be able to:

- Describe fundamental levels of organization of life
- Identify basic chemical features of living things
- Identify the major structures of cells and their functions
- Describe processes by which materials are selectively allowed into and out of cells
- Identify basic features and stages of the cell cycle and sexual life cycle
- Describe at a basic level the nature of genes, how they control traits, and how traits are passed from one generation to the next
- Exhibit knowledge of basic principles of evolution and ecology
- Compare accurately basic features of photosynthesis and respiration and their consequences
- Exhibit understanding of the scientific method
- Perform independent research sufficient to write an individual report in appropriate format on a topic not otherwise covered in the course
- Draw and label selected representatives of the diversity of life and their obvious structural features
- Identify the features drawn as in the organisms above and the functions of selected structures
- Perform experiments involving continual observation over a lab period
- Write a lab report in appropriate scientific format, including analysis of results of an experiment

Attendance/Participation Policy: Students are expected to attend all lectures and participate in all labs (including animal dissection). If you miss 2 weeks worth of class, I can drop you with an F. Please do not Sleep in class, you will be marked as absent that day. If you miss a class it is your responsibility to obtain a copy of missed notes and handouts. I recommend that you get to know other people in the class so you could copy notes if necessary

- The textbook should be brought to class. Diagrams and pictures from the book are frequently referred to during the lecture and the laboratory.
- Read and study all chapters and exercised indicated on the general outline.
- Take good notes in lecture and lab.

- Study daily, and review often. College level courses generally require about 2 hours of study for every hour of class.
- You must, using all the methods described above, come to know and understand the subject matter of each unit. You must be able to respond, in writing, to any question relating to the subject matter.

Make-up/Late Work Policy: Lecture Tests: Students are expected to notify me when circumstances prevent taking a scheduled test. You will be able to make up 1 lecture test. The make up test must be taken within one week of the original test date. If you miss a second test, it will be your drop test. Homework assignments will be deducted one point each day that they are late.

Laboratory: Your lowest lab quiz and assignment will be dropped. You can not turn in assignments for a lab that you missed. Laboratory exams must be taken on the scheduled day.

ACADEMIC HONESTY POLICY: Cheating in any form – including but not limited to looking at a classmate’s test, unauthorized possession of exams, or using unauthorized materials during exams – may result in the student being dropped from the class with an “F” or being suspended from the University. The University’s standards for academic honesty are set forth in the Student Handbook.

Accommodation Statement: It is the policy of ASU-Beebe to accommodate students with disabilities, pursuant to federal law and state law. Any student with a disability who would like to request accommodations please contact the Counselor/Coordinator of Disability Services at 501-882-8263 at the ASU-Beebe campus. Documentation review and accommodations for all ASU-Beebe system students with disabilities are authorized by the Counselor/Coordinator of Disability Services.

Disclaimer: This syllabus represents a ‘best’ plan for the course, but, as with most plans, it is subject to changes made necessary by time, space, and personal constraints. The course outline, as well as exam and assignment dates, may change as the course progresses. Students should attend all class meetings to learn of any schedule changes.

WEEK	LECTURE	LAB
1	Introduction to Course Chapter 1 Introduction to Biology	Use of Microscopes
2	Chapter 2 Cell Chemistry	Bacteria
3	Chapter 3 Organic Molecules Test #1 Chapters 1-3	Protists, Fungi
4	Chapter 4 Cell Organelles Chapter 5 Cell Membrane	Mosses, Ferns
5	Chapter 6 Enzymes and Reactions Test # 2 Chapter 4-6	Gymnosperms/ Angiosperms
6	Chapter 7 Metabolism Chapter 8 Photosynthesis Chapter 9 Mitosis	Cell Transport
7	Chapter 9 Cont'd Chapter 10 Meiosis Test #3 Chapter 7-10	Enzymes
8	Chapter 11 Inheritance Chapter 12 Human Genetics	Lab Test
9	Chapter 13 DNA Chapter 14 Protein Synthesis	Mitosis, Meiosis
10	Biotechnology Chapter 15 Test # 4 Chapter 11-15	Biotechnology
11	Introduction to Evolution Chapter 16 Microevolution Chapter 17 Macroevolution	Flatworms, Roundworms

	Chapter 18	
12	Chapter 18 Cont'd History of Life Chapter 19 Test #5 Chapters 16-19	Earthworms, Clams
13	Chapter 20 Diversity of Life Chapter 21 Diversity of Life Chapter 22 Diversity of Life	Crayfish, Starfish
	FALL BREAK	
14	Chapter 31 Populations Chapter 32 Ecosystems	Rat
15	Chapter 33 Animal Behavior	Lab Test
	FINAL EXAM	