

**Coffeyville Community College**

**BIOL-208**

**COURSE SYLLABUS**

**FOR**

**BIOLOGY II: Organismic Biology**

**Pam Oliver**  
**Instructor**

**COURSE NUMBER:** BIOL-208    **COURSE TITLE:** Biology II: Organismic Biology

**CREDIT HOURS:** 5

**INSTRUCTOR:** Pam Oliver

**OFFICE LOCATION:** South side, second floor Arts and Sciences Building

**OFFICE HOURS:** See schedule posted on door

**OFFICE PHONE:** 620-251-7700 ext. 2070

**E-MAIL:** pamo@coffeyville.edu

**PREREQUISITE(S):** Biology I or permission of instructor

**REQUIRED TEXT  
AND MATERIALS:**

Biology 8<sup>th</sup> edition. Campbell, Minorsky, Reece, Cain, and Lerry.  
Benjamin Cummins 2007.  
Investigating Biology Laboratory Manual. Morgan, Campbell.  
Dec 2007.

**CLASSROOM  
RULES:**

1. No Cell Phones
2. No Headphones

**COURSE  
DESCRIPTION:**

This is the second in a series of introductory biology classes designed for majors to fulfill their introductory biology requirement. Coursework includes the study evolution, behavior, and ecology, the diversity of life, and plant structure and function. By studying these areas, the student is exposed to the major fields of biological study.

**EXPECTED LEARNER  
OUTCOMES:**

Upon successful completion of Biology II, the student should be able to describe, identify, and demonstrate an understanding of:

1. Give an example and explain micro and macroevolution.
2. Describe the phylogeny of organisms and the systems of classification
3. Describe the characteristics of the Archae and Eubacteria and give examples
4. Describe the characteristics of and give examples of the Kingdom Protista
5. Describe the characteristics of and give examples of the Kingdom Fungi

6. Describe the characteristics of and give examples of the Kingdom Plantae
7. Describe the characteristics of and give examples of the Kingdom Animalia
8. Describe population dynamics and community ecology
9. Describe ecosystem characteristics
10. Explain environmental issues and ecological consequences.
11. Identify the steps of scientific method and be able to apply the Scientific Method in a laboratory setting

**LEARNING TASKS  
& ACTIVITIES:**

A variety of teaching methods will be used and can include lectures, discussions, PowerPoint presentations and demonstrations. During laboratory time, a general introduction will be given, then the students will use laboratory time to do one of the following activities:

1. Laboratory Activities
2. Videos
3. Library Research
4. Group Discussion

**ASSESSMENT OF  
OUTCOMES:**

The following evaluative techniques will be used:

Five lecture tests @ 100 points .....	500 points
Lab Quizzes and tests.....	200 points
Laboratory Participation and assignments .....	100 points
Presentation .....	<u>100 points</u>
<b>Total in Class .....</b>	<b>900 Points</b>

All assignments will be assigned points. At the end of the semester, your total points will be divided by the total possible number of points to arrive at a percentage.

The grading scale in this course is A (100-90%), B (89-80%), C (79-70%), D (69-60%), and F (59-0%).

Incompletes given at the end of the course will only be given if previously agreed upon by the student and instructor. Please note the college's policy on incompletes as stated in the college catalog.

## ATTENDANCE

### POLICY:

Each student is required to attend all classes. It is the responsibility of the student to make definite arrangements with the instructor for make-up work BEFORE going on a field trip or other college-sponsored event. Class periods, assignments, and tests that are missed without prior arrangements with the instructor may not be made-up unless unusual circumstances prevail and at the instructor's prerogative. Absolutely no labs can be made up, unless a student can attend lab with another class.

**COMPETENCIES:** Upon completion of this course, the following should be accomplished by the student.

Give an example and explain microevolution and macroevolution

- A. Define and be able to compare microevolution and macroevolution
- B. Explain the process of natural selection
- C. Define adaptation and give an example.
- D. Define species and population
- E. Define speciation and explain how it happens
- F. Describe the geological time scale

Describe the phylogeny of organisms and the systems of classification

- A. Name the 3 domains into which living things are grouped. Be able to distinguish each and give examples.
- B. List and give the properties of the 4 kingdoms of domain Eukarya.
- C. Utilize binomial nomenclature.

Describe the characteristics of the Archae and Eubacteria and give examples

- A. List the three bacterial types and the characteristics of bacteria.
- B. Compare and contrast prokaryotes and eukaryotes.
- C. Compare and contrast Eubacteria with Archae
- D. Compare and contrast blue-green bacteria with Eubacteria.
- E. List three genera of blue-green bacteria.

Describe the characteristics of and give examples of the Kingdom Protista

- A. List the characteristics of protists.
- B. Reproduce the life cycles of Chlamydomonas and Spirogyra.
- C. Compare and contrast the divisions listed.
- D. Describe the conjugation process.

Describe the characteristics of and give examples of the Kingdom Fungi

- A. List the characteristics of fungi
- B. Explain classifications of fungi

C. Reproduce life cycles.

Describe the characteristics of and give examples of the Kingdom Plantae

- A. Distinguish plant cells and tissues
- B. Identify and describe the various types of tissue found in plants.
- C. Distinguish between vascular and non-vascular plants.
- D. Differentiate between the phyla of seedless vascular plants.
- E. Compare and contrast the pine, fern and club moss life cycles.
- F. Differentiate between seed plants and seedless plants.
- G. List the structure and function of the parts of a flower.
- H. List the various fruit types and give examples of each.
- I. Reproduce the angiosperm life cycles.
- J. Describe the function of epicotyl, hypocotyl and radicle.

Describe the characteristics of and give examples of the Kingdom Animalia

- A. Recognize the general characteristic of animals
- B. Distinguish animal cells
- C. List the types and characteristics of animal tissues
- D. Understand animal architecture and its importance
- E. List the characteristics and types of sponges
- F. List the characteristics and types of cnidarians.
- G. List the characteristics and types of acoelomates (flatworms).
- H. Compare and contrast fluke and tapeworm life cycles.
- I. List the characteristics and types of pseudocoelomates (nematodes)
- J. Reproduce the Ascaris life cycle.
- K. List the characteristics of mollusks and differentiate between the classes of mollusks.
- L. List the characteristics and classes of annelids.
- M. List the characteristics and classes of arthropods.
- N. Differentiate between arachnids and insects.
- O. List the characteristics and classes of echinoderms.
- P. Name the four hallmark Chordata characteristics and give examples.
- Q. Differentiate between the different types of Vertebrates and their characteristics.

Describe population dynamics and community ecology

- A. List the components of an ecosystem and list some relationships within the ecosystem.
- B. Reproduce a food pyramid and explain the trophic levels.
- C. Describe a food web.
- D. Compare and contrast primary and secondary succession.
- E. Explain and Illustrate biogeochemical cycling.
- F. Describe the 6 biomes.
- G. Explain environmental problems and consequences on the ecosystem.

**CLASS SCHEDULE: dates are subject to change**

Unit 1 Test: 1/29	Chap 25: Evolution Chap 26: Phylogeny
Unit 2 Test: 2/17	Chap 27: Prokaryotes Chap 28: Protists
Unit 3 Test: 3/12	Chap 29: Plants: Non vascular Chap 30: Plants: Vascular
Unit 4 Test: 4/7	Chap 31: Fungi Chap 32: Animal organization
Unit 5 Test: 5/5	Chap 33: Invertebrates Chap 34: Vertebrates