Semester and year: 
Course Number and Section: 
Meeting Times and Locations: 

Instructor: 
Office Location: 
Phone: 
Office Hours: 
Email Address: 

COURSE DESCRIPTION: 

**BIO-203 General Biology II** explores the evolution and biodiversity of representative organisms in the plant and animal kingdoms. Studies of plants investigate diversity, structure, and the physiology of absorption, transport, and photosynthesis. Students will examine the structure and life cycles of invertebrate and vertebrate animals. In a unit on Ecology, students will learn how living organisms interact with their environment. Laboratory exercises utilizing observation, experimentation, microscopy, and dissection provide practical demonstrations of the topics covered in lecture. 

COURSE HOURS/ CREDITS: 3 lec., 3 lab., 4 credits 

PREREQUISITES: BIO 101 General Biology I 

GENERAL EDUCATION COURSE: Yes - Natural Sciences 

BIOLOGY MAJOR/NONMAJOR COURSE 

COURSE TEXTS AND/OR OTHER STUDY MATERIALS: 

Textbook: 

Laboratory Manual: 
Study Guide: (Required for Dr. Crescitelli’s sections)


SUPPLEMENTARY MATERIALS:

Dissecting Kit
Colored Pencils

STUDENT LEARNING OBJECTIVES:

As a result of meeting the requirements in this course, students will be able to:

1. Survey the biodiversity that exists in the plant and animal kingdoms.
2. Apply scientific principles to gather and analyze biological data.
3. Develop laboratory skills, including the examination of living material, using the microscope, dissecting, and performing experiments to study physiological processes.
4. Identify the characteristics of the Plant Kingdom that distinguish plants from organisms in other Kingdoms.
5. Become aware of the diversity of the Plant Kingdom by completing an evolutionary survey of plant groups.
6. Investigate the adaptations that enabled plants to make the evolutionary transition from living in water to living on land.
7. Analyze the life cycles of plants and understand the concept of Alternation of Generations.
8. Examine key trends in the evolution of lower plants to higher plants, including the shift from dominance of the gametophyte to dominance of the sporophyte, and the shift from dependence of the sporophyte upon the gametophyte to dependence of the gametophyte upon the sporophyte.
9. Investigate the structure and function of plant organs including roots, stems, leaves, and flowers.
10. Analyze physiological processes in plants, including photosynthesis, absorption of water and minerals, and transport
of water and minerals and carbohydrates.

12. Identify the characteristics that distinguish animals from organisms in other Kingdoms and understand how they are used to classify animals.

13. Trace the evolution and diversity of invertebrate and vertebrate animals by way of an evolutionary survey.

14. Investigate the structure and physiological processes of representative animals.

15. Identify the evolutionary advancements and adaptations to the environment that have given particular animals advantages in occupying and utilizing niches in their environment.

16. Examine the process of reproduction and trace the life cycles of representative animals.

17. Identify the levels of organization of ecology, including populations, communities, ecosystems, biomes, and the biosphere.

18. Analyze the interactions between living organisms and physical factors (temperature, light, and moisture) as well as biotic factors (other living organisms) in their environment.

19. Examine the importance of biological principles such as evolution, biodiversity, and ecology to society.

ASSESSMENT CRITERIA:

Assessment of the above objectives will be based on student performance on lecture examinations, quizzes, laboratory reports, laboratory quizzes, and class participation as indicated by the instructor. A term paper may be assigned at the option of the instructor.

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Absorption Spectra of Chloroplast Pigments

**Computer Assisted Lab:** Photosynthesis and Respiration


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15. Symbiosis Laboratory Exercise Handout
SPECIAL FEATURES OF THE COURSE:

Technological Literacy: A number of laboratory exercises are conducted using laptop computers equipped with software programs that will collect data, analyze it, and graph it. These exercises will develop the ability of students to use computer technology to facilitate the analysis of laboratory data.

Research, Writing, and/or Examination Requirement(s):

Students will employ and develop writing skills in the completion of essay questions on examinations, questions on laboratory reports, and quizzes.

GRADING POLICY:

A. Unit Examinations: number____ .......................... ____%  

B. Laboratory Work ........................................... ____%  

C. Reports/Projects ....................................... ____%  

D. Class Participation .................................. ____%  

E. Other ............................................. ____%  

TOTAL ..................................................... 100  %

MAKE UP POLICY:

As indicated by instructor.

ATTENDANCE:

Attendance policy as indicated by instructor.

SMOKING/EATING/DRINKING:

Smoking is not allowed in any building on campus. Please do not bring food or drink into the classrooms or laboratories.

LABORATORY SAFETY:

Your laboratory instructor will review safety precautions prior to
each laboratory session. Careful adherence to these precautions is essential in order to prevent injury to yourself or to others working around you.