

COURSE DESCRIPTION

Dept., Number	BISC 162	Course Title	Biological Sciences II
Semester hours	3	Course Coordinators	Paul K. Lago, PhD, Professor and Chair Lucile M. McCook, PhD, Instructor, Curator of Pullen Herbarium

Current Catalog Description

Continuation of BISC 160. A comprehensive treatment of the major principles of modern biology. Intended primarily for biology majors and minors and for preprofessional biomedical students.

Textbook

Eldra Solomon, Linda Berg, and Diana Martin. *Biology*, 8th edition, Brooks and Cole, 2007.

References

Course website: <http://www.olemiss.edu/courses/bisc162/>

Course Outcomes

Upon successful completion of this course, the students:

1. know how the basic organ systems of vertebrates operate, with an emphasis on human systems;
2. are familiar with the salient and phylogenetically important features of the various phyla of living organisms in all six kingdoms;
3. understand the basis and workings of modern biological systematics;
4. understand differing solutions of various living organisms to the challenges presented by the environment;
5. understand structure and function in plants;
6. understand scientific theories about the origin and history of life on earth;
7. understand modern ecology through the study of ecosystems, with an emphasis on human ecology.

Relationship between Course Outcomes and Program Outcomes

The ABET/CAC criteria for computer science require 30 credit hours of science and mathematics appropriate for the discipline. The BSCS program meets this criterion by requiring 14 hours of natural science courses intended for majors in those fields, including a two-course sequence with associated laboratories in one field, and 18 hours of mathematics beyond the precalculus level. Biology 160 and 162 and their associated laboratories, Biology 161 and 163, form one option for satisfying the laboratory science requirement. The course outcomes are related to the expectations for the role of natural science in the BSCS curriculum.

Prerequisites by Topic

BISC 160 with a minimum grade of C.

Major Topics Covered in the Course

1. Introduction to embryology
2. Integument and bones
3. Muscles
4. Digestive system
5. Internal transport (blood)
6. Circulatory system
7. Lymphatic system and immunity
8. Respiratory system
9. Excretory system
10. Neurons
11. Nervous system
12. Endocrine system
13. Reproductive system
14. Origin and evolution of life
15. Systematics and taxonomy
16. Viruses
17. Prokaryotes
18. Protists
19. Fungi
20. Seedless plants
21. Seed plants—angiosperm reproduction
22. Plant structure and leaves
23. Stems and roots
24. Protostomes
25. Deuterostomes
26. Population ecology
27. Ecosystems ecology
28. Global ecology

Assessment Plan for the Course

The instructor assesses the student performance related to the course outcomes by using examinations.

How Data in the Course are Used to Assess Program Outcomes (unless adequately covered already in the assessment discussion under Criterion 4)

The conduct of this course is not governed by the ABET program faculty. No data are collected that are used to assess program outcomes directly.

Estimate Curriculum Category Content (Semester hours)

Science 3 hours