I. BIO 104, Principles of Biology II, 4 semester hours

II. Course Description
This course is an introduction to the basic ecological and evolutionary relationships of plants and animals and a survey of plant and animal diversity including classification, morphology, physiology, and reproduction. A 180-minute laboratory is required.

III. Prerequisite or Co-requisite
BIO 103.

IV. Textbook
Due to the varied selection of quality college level textbooks, each college will select the textbook needed to meet the requirements of this course.

V. Course Objectives
1. The student will develop an understanding of the principles and practices of scientific nomenclature and classification.
2. The student will develop an understanding of the phylogenetic relationships among plants.
3. The student will develop an understanding of the phylogenetic relationships among animals.
4. The student will develop an understanding of the morphology and physiology of plants and animals.
5. The student will develop an understanding of the basic reproductive patterns of plants and animals.
6. The student will become acquainted with the principles of ecology and evolution.

VI. Course Outline of Topics

Lecture Outline Topics

1. Introduction to Botany
2. Plant cells and tissues
3. Ecology and Evolution
4. A Survey of the Plant Kingdom: Bryophytes, Seedless Vascular Plants, Gymnosperms, Angiosperms

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5. Roots, Stems, Leaves, Flowers, Fruits, Seeds
6. Introduction to Zoology
7. Classification, Organization, Body Plans, and Phylogeny of Animals
8. Evolutionary Relationships Among Animals

Laboratory Outline Topics

Prepared slides, preserved specimens, and living materials are used to cover the following topics:

1. Plant Cells and Tissues
2. Plant Classification
3. Bryophytes
4. Seedless Vascular Plants
5. Gymnosperms
6. Angiosperms
7. Stems, Flowers, Fruits, and Seeds
8. Porifera
9. Cnidaria
10. Ctenophora
11. Platyhelminthes
12. Nematoda and other Pseudocoelomates
13. Annelida
14. Mollusca
15. Arthropoda
16. Echinodermata
17. Chordata

VII. Evaluation and Assessment

Lecture exams
Lab reports
Observed / graded performance of lab techniques
Lab exams
Other activities

The laboratory experience should represent at least 25 percent of the final grade for this course.

Grades will be given based upon A = 90 – 100%, B = 80 – 89%, C = 70 – 79%, D = 60 – 69%, and F = below 60%.
Lecture / Laboratory Relationship
Weekly laboratory exercises should be directed related to the lecture material.

VIII. Attendance
Students are expected to attend all classes for which they are registered. Students who are unable to attend class regularly, regardless of the reason or circumstance, should withdraw from that class before poor attendance interferes with the student’s ability to achieve the objectives required in the course. Withdrawal from class can affect eligibility for federal financial aid.

IX. Statement on Discrimination/Harassment
The College and the Alabama State Board of Education are committed to providing both employment and educational environments free of harassment or discrimination related to an individual’s race, color, gender, religion, national origin, age, or disability. Such harassment is a violation of State Board of Education policy. Any practice or behavior that constitutes harassment or discrimination will not be tolerated.

X. Americans with Disabilities Act
The Rehabilitation Act of 1973 (Section 504) and the Americans with Disabilities Act of 1990 state that qualified students with disabilities who meet the essential functions and academic requirements are entitled to reasonable accommodations. It is the student’s responsibility to provide appropriate disability documentation to the College.