GEORGIA PERIMETER COLLEGE
DIVISION OF SCIENCE
COMMON COURSE OUTLINE
REVISION DATE: April 2004

COURSE ABBREVIATION        Biol 1403 L
CREDIT HOURS                1 semester hour
COURSE TITLE                Diversity in the Living World Laboratory
PREREQUISITES              Exit or exemption from Learning Support English, reading, and ESL requirements.
COREQUISITE                Biol 1403 (3 semester hours)

CATALOG DESCRIPTION
This course provides the student with hands-on experience with a variety of living and preserved organisms, including animals, plants, fungi, protozoa, algae, and bacteria, and the principles of evolution and ecology that unite them. This course is designed for non-science majors.

EXPECTED EDUCATIONAL RESULTS
As a result of completing this course, the student will be able to:
1. Identify and describe the distinguishing features of each of the kingdoms, and the major groups (phyla, divisions, classes) in each kingdom.
2. Identify particular specimens as members of the kingdoms and their subgroups.
3. State the major premises of the theory of evolution by natural selection, and identify and explain examples of evidence for the theory.
4. Relate the characteristics of living organisms and preserved specimens to life processes.
5. Collect, analyze and use data to describe the interactions among organisms and their environments in laboratory investigations.

GENERAL EDUCATION OUTCOMES
1. This course addresses the general education outcome relating to communications as follows:
   Students develop their reading comprehension skill by reading the text, handout materials, and published articles as assigned.

   Students develop their listening skills through small group collaborative activities.

   Students develop their reading and writing skills through the use of exercises that will require them to read and follow instructions, and write laboratory papers.
2. This course addresses the general education outcome relating to usage of mathematical concepts and applies the scientific method as follows: Students will apply the scientific method as they learn to develop and test hypotheses, analyze data, and determine the validity of conclusions supported by data.

Students will use quantitative information, algebraic concepts, and simple statistics to analyze and present data from laboratory exercises.

COURSE CONTENT (See Appendix)

Laboratories listed may be changed or rearranged to correspond to topics in the lecture (Biol 1403) or to suit the needs of each campus.

Using the Scientific Method.

Microscopes and Metric System.

Observation of familiar organisms  (Possible Field trip to Zoo Atlanta, Atlanta Botanical Garden, or other).

Basic Mammalian Anatomy and Comparative anatomy of vertebrates.

Biology & Organization of Plants, Reproduction in Plants

Seed Plants.

Seedless Plants: Ferns, Horsetails, Club mosses, and Mosses

Using a taxonomic key.

Evidence of Evolution

Higher Invertebrates: Deuterostomes & Protostomes

Lower Invertebrates

Ecology Laboratory

Symbiotic Relationships

Kingdom Fungi

Kingdom Protista

Prokaryotic Domains: Bacteria & Archaea

ASSESSMENT OF EXPECTED EDUCATIONAL RESULTS

1. COURSE GRADE

Course grade will be based on laboratory practical tests, quizzes, laboratory drawings, a final exam (laboratory practical), and writing assignments (laboratory papers) made by the instructor.

2. DEPARTMENTAL ASSESSMENT

Biol 1403L will be assessed by regular consultation between instructors and other members of the Transfer Biology Committee.

An assessment test will be administered to all students enrolled in Biol 1403 every five years. Portfolio assessment of students' writing on final exams may be included in the assessment process.
3. USE OF ASSESSMENT FINDINGS
Instructors will consult the assessment results and each other to determine which educational approaches are working well, and which could be improved. They will continue what works and explore improved approaches to instruction where that is needed.

EFFECTIVE DATE: November 2000
APPROVED DATE: November 2000
REVIEW DATE: April 2004
APPENDIX: COURSE CONTENT

The Transfer Biology Curriculum Committee asserts that certain information is of primary importance, and other information is less important.

PRIMARY IMPORTANCE:

1. Certain kinds of organisms (major groups) exist (or have existed).

   These groups exhibit characteristic traits, characters, or attributes
   
   How these organisms live
   develop & grow
   find and use energy (food)
   feed, digest, or gather nutrients
   maintain themselves (metabolism)
   reproduce

   Classifications reflect hypotheses of relationships
   Scholars differ on what groups should be recognized and how they are related.

2. These organisms have histories & futures.

   How populations, species, higher taxa arise & evolve.
   Organisms are related by common ancestry
   Relationships can be discovered by cladistics (phylogenetic analysis)
   Classification should reflect evolutionary history (phylogeny)
   Natural selection is the mechanism of evolution.

   Populations interact (Ecology)

SECONDARY IMPORTANCE:

1. Taxon names and levels.

   Needed to organize, and communicate primary info. above.
   Each instructor should make clear which group names students must learn.