

PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

INDEPENDENT SCIENTIFIC INVESTIGATION
BIOL 2000

Class Hours: 1.0

Credit Hours: 2.0

Lab Hours: 6.0

Date Revised: Fall 2010

Catalog Course Description:

Independent laboratory, library or field research in biology under the supervision of a consenting faculty member. Designed to develop an interest in biology and the application of techniques of scientific research. Students may accumulate up to 6 credit hours; a minimum of four hours of research is required each week. Intended as elective credit and may not be applied toward general education requirements.

Entry Level Standards:

The student should have a good basic understanding of science and an interest in studying a topic in depth. The student should also be able to write well, as the course may involve written papers.

Prerequisites:

None

Textbook(s) and Other Course Materials:

Textbooks will vary, depending on the course topic and the instructor.

I. Week/Unit/Topic Basis:

Activities will vary according to course content and may include lectures, discussions, field trips, laboratory experiments, essays, and term papers.

II. Course Objectives*:

- A. Develop an understanding of a particular aspect of biology. I.5, III.1-2
- B. Develop an understanding of technological advances of a particular aspect of biology. V
- C. Know how to read a scientific paper critically. I.2, III.1-2
- D. Develop critical thinking skills and problem solving skills to review and analyze information relating to the selected topic. III
- E. Develop an appreciation of the societal issues involved with the special topic, when appropriate. IV

*Roman numerals after course objectives reference TBRs general education goals.

III. Instructional Processes*:

Students will:

1. Engage in teamwork to facilitate cooperative learning. *Active Learning Strategies*
2. Approach problems both mathematically and verbally. *Communication Outcome, Problem Solving and Decision Making Outcome, Numerical Literacy Outcome*
3. Use critical thinking skills to solve problems. This will be done in groups to promote idea sharing. *Problem Solving and Decision Making Outcome, Active Learning Strategies*
4. Use critical thinking skills to evaluate scientific literature. *Communication Outcome, Information Literacy Outcome*
5. Learn about appropriate technologies. *Technological Literacy Outcome*
6. Gain the knowledge to have a foundation in the selected topic, assisting the student in moving on to upper level science courses. This will be done by a variety of means, including listening to lectures, experimenting (when appropriate), participating in field activities, viewing video tapes and video discs, and participating in group discussions. *Communication Outcome, Personal Development Outcome, Numerical Literacy Outcome, Transitional Strategies, Active Learning Strategies*
7. Use discussions to evaluate the societal implications involved with the special topic. *Personal Development Outcome, Cultural Diversity and Social Adaptation Outcome*

*Strategies and outcomes listed after instructional processes reference TBRs goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

IV. Expectations for Student Performance*:

Upon successful completion of this course, the student should be able to:

1. Discuss basic and advanced facts associated with the selected topic. A
2. Discuss implications for society and for the future based on information regarding the selected topic. A, B, E
3. Understand the manner in which the special topic fits into the overall picture of that area of biology. A,D
4. Read a scientific paper. C, D
5. Write a scientific paper. C, D
6. Discuss and use (depending on the course) appropriate technologies. A, B

*Letters after performance expectations reference the course objectives listed above.

V. Evaluation:

A. Testing Procedures:

The specific evaluation methods will vary according to the course content. However, essay test questions, participation in class activities, and written out-of-class papers will all be a part of the evaluation process. The course syllabus distributed on the first day of class will give specifics.

E. Grading Scale:

90-100	A
80-89	B
70-79	C
60-69	D
Below 60	F

VI. Policies:

A. Attendance Policy:

Pellissippi State Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course.

B. Academic Dishonesty:

With any form of valid proof of dishonesty with regard to student work or testing, the instructor may elect from a range of actions. Academic dishonesty could lead to failure for the entire course or dismissal from the institution.

C. Accommodations for disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at www.pstcc.edu/departments/swd/.

D. Other Policies:

Classroom disruptions during lecture or laboratory, any form of communication during testing, or any other form of behavior that may prove distracting to others will not be tolerated and may lower the final grade.