PHOENIX COLLEGE

GO FAR. CLOSE TO HOME.

"Students are responsible for knowing and complying with the information in this syllabus."

"Every student is expected to know and comply with all current published, rules, and regulations as printed in the college catalog, class schedule, and/or student handbook."

"Students will be notified by the instructor of any changes in course requirements or policies."

BIO182 General Biology (Majors) II SYLLABUS SPRING 2007

The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology. Prerequisites: A grade of C or better in BIO181.

1) Explain and apply the scientific method to solve problems in biological context.
2) Explain and compare characteristics common to living organisms and levels of organization.
3) Identify and describe the basic principles of evolution.
4) Analyze the relationships between the genetics of populations and evolution.
5) Analyze the processes of speciation.
6) Describe how the hierarchical classification scheme is used to categorize organisms.
7) Describe how DNA (deoxyribonucleic acid) research has modernized bio-systematics.
8) Compare and contrast the general characteristics of each of the living domains and kingdoms.
9) Relate the structure of organisms to the way they function.
10) Explain how the life-histories of organisms are adapted for different environments.
11) Relate the complexity of behavior to the overall complexity of an organism.
12) Describe the ecological roles played by organisms in each kingdom.
13) Compare basic ecological principles at the population and community levels of organization.
14) Describe and compare energy relationships and the cycling of materials in ecosystems.
15) Demonstrate knowledge of laboratory safety skills and procedures.
16) Practice principles of scientific method while conducting laboratory activities and experiments.
17) Perform laboratory activities using relevant laboratory equipment, chemical reagents, and supplies to observe biological specimens, to measure variables, and to design and conduct experiments.
18) Operate light microscopes, prepare wet-mount slides, and use stains.
19) Exhibit ability to use pipettes and other volumetric measuring devices, chemical glassware, balances, pH meters or test papers, spectrophotometers and separation techniques such as chromatography and/or electrophoresis to perform activities relevant to other course competencies.
20) Develop graphing skills by hand and/or using appropriate computer software.
21) Analyze and report data generated during laboratory activities and experiments.

SECTIONS, CLASSROOMS & TIMES

1) Lectures: Section 0480 TR 10:00-11:15 am in DB 225
2) Labs: Section 0482 W 10:00 am-12:50 pm in DB 106 or 0484 W 1:00 pm-3:50 pm in DB106

INSTRUCTOR INFORMATION

1) Instructor: Dr. Philip Pepe
2) Office: DB-212
3) Telephone: 602-285-7106.
   The answering machine will take your message if I am not in the office.
4) Office hours: TWR 9-10 am
   Online hours: MF 1-2 pm
   If you can't meet during my office hours because of a schedule conflict, another mutually convenient time can be arranged. If you need help, please let me know!
5) E-mail: phil.pepe@pcmail.maricopa.edu

MATERIALS

Required Textbook: [available at PC Bookstore]

1) Biology 7th Edition by Campbell and Reece.

Other Required Materials: [available at PC Bookstore, Staples or Office Max]

1) 3-Inch Loose-leaf notebook with tabs

COURSE REQUIREMENTS

The Arizona Board of Regents has established as a general guideline that each course should require a student to spend a minimum of two hours in preparation outside the class for every hour spent in class. This time should be devoted to reading, taking chapter notes, writing papers, and study for tests and quizzes.

CLASS FORMAT

The lecture and laboratory are designed to complement each other. Materials and topics are presented in a factual and theoretical format accompanied by an experimental format to demonstrate, verify, and solidify these concepts as well as to stimulate interest and develop the skills necessary for further inquiry.

There will be limited access to the lab outside of the scheduled time allotted. Therefore, students should always be prepared and use their time methodically and efficiently. It is required that all lab exercises be thoroughly read before coming to the lab and that as many assigned questions as possible be at least partially answered. There are limited supplies for the course and thus, they should be used by the student in turn and made available to others when not in use.

Students are always encouraged and will sometimes be required to form groups both in and outside of the class for the purpose of discussing, and/or reviewing, and forming conclusions concerning the materials covered in the lecture and laboratory. In addition, it is recommended that students form associations in the lab in order to complete the assignments and experiments in an efficient, thorough, and timely fashion.

CLASS POLICIES

1) Students must be registered for both my lecture and lab concurrently. Anyone who is not registered cannot attend.

2) Absences and Tardiness:
   a) Attendance is required and will be recorded in both lecture and laboratory.
   b) Two of the laboratory sessions will be held off campus at the Phoenix Zoo and at Phoenix Mountain Park. It is the student's responsibility to meet at the field trip location. Car pools will be arranged to facilitate transportation.
   c) Unexcused absences, including social and family events, in excess of 3 for lecture or 1 for laboratory will result in your withdrawal from the course.
   d) Excused absences are defined as the following: illness/accident (student), illness/accident/death (family member), jury/military duty, athletes participating in College sponsored athletic events. Verification of the reason for the absence is required on or before the day you will return to class/lab.

e) Call me or e-mail me prior to the absence or as soon as possible after the absence.
f) Arriving late without a valid excuse is unacceptable since important instructions and safety directions are typically given at the beginning of each session. Incidents of unexcused tardiness accumulate as unexcused absences (2 tardies = 1 abscence).
g) If you anticipate a change in attendance due to personal or work changes you must meet with me as soon as possible.

3) Student Initiated Withdrawals:
   a) If you wish to be withdrawn from class, for whatever reason, you must start withdrawal proceedings by notifying your instructor, do not just stop attending class and expect your instructor to withdraw you from class.
   b) Some important dates:
   Friday, March 2: Last day for student initiated withdrawal without instructor signature
   Monday, April 23: Last day for student initiated withdrawal with instructor signature

4) Student Services:
   a) If you are aware of any physical or non-physical disability that may affect your performance in class, please inform your instructor during the first week of class. Phoenix College's Disability Support Services can provide for some of the special needs of disabled students (See the Phoenix College Student Handbook pages A-13/A-14.). Disability Support Services include interpreting for the deaf, note taking, reading, testing accommodations, and accommodations for the learning disabled with documentation. Special Services is located in the Learning Center Building Phone: 602-285-7477.
   b) Phoenix College's Learning Center provides free tutoring, educational materials, computer-assisted instruction, and student development workshops. The Learning Center is located in the Learning Center Building.
   c) Phoenix College's Math + Science Center also provides free tutoring, educational materials, computer-assisted instruction, and student development workshops. The Math + Science Center is located on the second floor of the Fanin Library Building.

5) Academic Dishonesty:
   a) Academic dishonesty includes cheating and plagiarism. A First offense will be given a score of 0 for the assignment. A Second offense will result in failure of the course. All incidents will be reported to the Biology Department Chairperson and to the Dean of Instruction. (See the Phoenix College Student Handbook pages C-7/C-8.) For your protection, please avoid even the appearance of academic dishonesty.

6) Disruptive Behavior:
   a) Major disruptive behavior in class will not be tolerated and will be dealt with in accordance with college policy. (See the Phoenix College Student Handbook pages C-23/C-28.) Major disruptive behavior includes harassment of other students or instructor and inappropriate or unsafe activities with respect to other students, instructors, equipment or supplies.
   b) Minor disruptive behavior will not be tolerated and will be dealt with in accordance with college policy. Minor disruptive behavior includes excessive talking, excessive late arrivals, excessive early departures; use of pagers, cell phones, head sets and MP3 devices; and working on non-course activities during class time.

7) Respect for Diversity:
   a) Diversity encompasses: age, life experiences, profession, ethnicity, region, nation, lifestyle, social class, learning style, philosophy of life, sexual orientation, religion, personality, mental and physical challenges, customs, values, and gender. In this class, anyone with a different perspective or a different angle on reality will be respected. I am committed to fostering a respect for each other's right to think, feel or act in their own manner.

ASSIGNMENTS, EVALUATION & GRADING:

We highly recommend keeping a loose-leaf notebook to keep the course power point notes, study worksheets, lab notes, field notes, research notes, handouts, lab exercises, lab reports, essays, etc. This is literally everything associated with the class. The contents of the notebook should be neatly arranged in chronological order according to the subjects and dates listed on the class schedule. Each topic and date should be identified by a clearly identifiable tab. The notebooks will be used throughout the course for content and ease of retrieval.

Two Field Trips are required at student's expense. One trip is to the Phoenix Zoo and the other is to Phoenix Mountain Park. The trips will be run during lab time (see the Lecture and Lab Schedule for the dates). Students must provide their own transportation to the field trip locations.

1) **There are 1,000 total points available for the course: (700 for Lecture + 300 for Lab)**

Assignment	Number	Points @	Point Totals
Lecture Activities	25	6	150
Lecture Quizzes	6	25	150
Lecture Essays	5	50	250
Lecture Worksheets	10	15	150
Lecture Subtotal			700
Laboratory Activities	15	10	150
Laboratory Paper Review	1	25	25
Laboratory Report Outline	1	25	25
Laboratory Report	1	100	100
Laboratory Subtotal			300
COURSE TOTAL			1,000

2) **Grading Information:**

a) **Twenty five Lecture Activities** will be assigned worth a total of **150** points. Each lecture activity, worth 6 points, will consist of completing lecture exercises during class time. Completed exercises will be collected at the end of each lecture.

b) **Six Lecture Quizzes** will be given worth a total of **150** points. Each of the Quizzes will cover a set of power point presentations and assigned readings. Each Quiz will consist of 10 questions worth 2.5 points @ (see the Lecture and Lab Schedule for quiz dates).

c) **Five Lecture Essays** will be assigned worth a total of **250** points. Each Essay will consist of completing an assignment, finding related information items, and writing a two page paper worth 50 points. The essay will be written as homework, and turned in on the assigned date (see the Lecture and Lab Schedule for due dates).

d) **Ten Lecture Worksheets** will be assigned worth a total of **150** points. Each worksheet assignment will consist of chapter questions from the textbook and properly filling out a package of forms distributed weekly. Each worksheet will be worth 15 points. The worksheet will be completed as homework, and turned in one week after it is assigned (see the Lecture and Lab Schedule for due dates).

e) **Fifteen Laboratory Activities** will be assigned worth a total of **150** points. Each lab activity, worth 10 points, will consist of preparing for and completing lab exercises during class time in the laboratory or the field. Completed exercises will be collected at the end of each lab or field trip.

f) **One Laboratory Paper Review** will be assigned worth a total of **25** points. The lab paper review will consist of reading an assigned scientific paper and completing a series of short answers to questions about the assigned paper (see the Lecture and Lab Schedule for the due date).

g) **One Laboratory Report Outline** will be assigned worth a total of **25** points. The lab report outline will consist of completing an outline form in preparation for writing the laboratory report (see the Lecture and Lab Schedule for the due date).

h) **One Laboratory Report** will be assigned worth a total of **100** points. The lab report will consist of writing a five to six page paper in scientific format and will be worth 100 points (see the Lecture and Lab Schedule for the due date).

i) **One Optional Cumulative Final** will be given worth a total of **300** points. The final will cover the quiz material from the entire semester. The final is optional and a student may elect not to take it. A student will be allowed to take the final if and only if they have taken at least 5 of the six quizzes. The final exam score will replace the cumulative score on the six quizzes if it is higher. It will be ignored if it is not. The Final will consist of 60 questions worth 5 points @ (see the Lecture and Lab Schedule for final date).

3) **I will not accept late assignments.** Assignments will be collected on the due date at the beginning of the class period. This includes all worksheets, reports, checks, and essays.

4) **There are no make-ups for missed quizzes.** A cumulative comprehensive final exam will be offered during finals week. The optional cumulative final can be used to replace your score on all six quizzes.

5) **There are no make-ups for missed labs once the labs are completed for each week.** Labs can only be made up on the basis of a legitimate emergency by attending a concurrent section (same week as your original lab). You must make arrangements with me right away if an emergency arises so that I can contact other instructors that may allow you in their lab section.

6) **Final Grades:**

a) The grade for the semester is determined by adding together all individual scores and calculating one final percent score:

A = 900 + points (90%+)
B = 800-899 points (80 through 89%)
C = 700-799 points (70 through 79%)
D = 600-699 points (60 through 69%)
F = 599 points or lower (Less than 60%)

Lecture and Lab Schedule Spring 2007

Dates	Chapters	Lecture Topics	Lab Topics
Jan 16	1	Orientation/Critical Thinking	
Jan 17			1] Orientation Lab and Library
Jan 18	1	Biological Science	
Jan 23	22	Darwin's Theory	
Jan 24			2] FT-Zoo Trip
Jan 25	22	Worksheet 1, Evolution	
Jan 30	25	Quiz 1, Macroevolution	
Jan 31			3] Taxonomy
Feb 1	25	Worksheet 2, Phylogenetics	
Feb 6	32, 34	Essay 1, Tetrapod Evolution	
Feb 7			4] Mammals
Feb 8	34	Worksheet 3, Tetrapod Evolution	
Feb 13	40	Quiz 2, Animal Structure	
Feb 14			5] Animal Function
Feb 15	41	Animal Function	
Feb 20	42, 44	Animal Function	
Feb 21			6] Plant Tissues
Feb 22	29 & 30	Worksheet 4, Plants	
Feb 27	35	Essay 2, Plant Structure	
Feb 28			7] Plant Function
Mar 1	36	Plant Function	
Mar 6	37, 38	Quiz 3, Plant Function	
Mar 7			8] Community Ecology
Mar 8	50, 53	Desert Plant Adaptations	
Mar 13	50, 53	Essay 3, Ecological Organization	
Mar 14			9] FT-Plant Distributions
Mar 15	50, 53	Worksheet 5, Ecological Interactions	
Mar 20	50, 53	Rainforest Ecology	
Mar 21			10] Pond Water Enrichment
Mar 22	54	Quiz 4, Protists	
Mar 27	54	Worksheet 6, Aquatic Ecosystems	
Mar 28			11] Library Databases-Paper
Review Due			
Mar 29	27	Prokaryotes	

Dates	**Chapters**	**Lecture Topics**	**Lab Exercises**
Apr 3	27, 28	Worksheet 7, Microbial Processes	
Apr 4			12] Microscopy Lab/Algal Indicators
Apr 5	31	Quiz 5, Fungi	
Apr 10	27, 31	Essay 4, Soil Microbes	
Apr 11			13] Soil Microbes Lab Report Outline Due
Apr 12	52	Population Ecology	
Apr 17	23	Worksheet 8, Population Genetics	
Apr 18			14] Mutation & Selection
Apr 19		Population Genetics	
Apr 24	23	Natural Selection	
Apr 25			15] Microbial Populations Lab Report Due
Apr 26	23	Worksheet 9, Microevolution	
May 1	24	Speciation	
May 2			16] Population Genetics
May 3		Quiz 6, Worksheet 10, Essay 5	
May 8		Optional Cumulative Final Exam	