

Peru State College
BIOL 130 – GENERAL BIOLOGY
Syllabus – Spring – 2010

Instructor: Dr. John Hnida

Office Hours: MW 9:30 – 10:30; T 9:30 – 10:30; F 10:00 – 12:00

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Course Meets: Lecture MW 12:30 – 1:45; Lab T 12:30 - 2:15

Required Textbook:

Campbell, J.B. Reece & E.J. Simon. 2007. *Essential Biology*, 3rd Edition. Benjamin Cummings, San Francisco.

Bring the lecture text to lab, because it has many useful photos and diagrams.

Course Description: An integrated course for non-majors designed to introduce the basic patterns and processes of biology and the scientific method.

Prerequisites: none

Objectives: Upon completion of this course you should be able to:

1. Understand some of the basic concepts of biology and other natural sciences
2. Know and use the vocabulary of biology and other natural sciences
3. Access and critically review current biological literature available in the PSC Library

At the beginning of the course, we will discuss how these objectives fit into the College's and School's mission and goals.

Instructional Approach & Expectations

The instructional approach will include classroom lectures and hands-on laboratory exercises.

Because attendance and participation are vital to one's learning experiences, you are expected to be at all lectures and labs having read the assigned material beforehand and prepared to participate in the day's work. You are also expected to be on time. To foster a learning environment, please join me in treating your classmates and yourselves with respect. I encourage you to ask questions, to seek help when needed, and to help your classmates understand the material.

Assessment, Grading and Attendance

Lecture

Exams: There will be 2 in-class exams; each will be worth 100 points and will consist of short-answer, definition, and multiple-choice questions. The final exam (145 points) will include some of the materials covered in previous exams. Exam questions will come from homework, lectures, *and* reading assignments. You will be tested on the reading assignments, regardless of whether or not they have been discussed in class.

Writing Assignments – There will be 2 writing assignments: one that involves reading and writing about a biology-related article taken from the popular press and one that involves reading and writing about a biology-related article taken from a science journal.

Popular Press Article Review (15 points): Find a biology-related article that was published in the popular press (e.g., The New York Times Science Section) within the last 12 months. Read it carefully and then do the following: 1) Summarize the main points of the article in your own words and in a clear and concise manner; the summary is worth 5 points. 2) Describe, in detail, how information in the article relates to appropriate information that you find in the textbook. This must be done in your own words and must include the page numbers of the text to which you refer (otherwise you will get a zero). This part of the assignment is worth 5 points.

The review must be 1½ to 2 pages long (double-spaced). Be sure to pay close attention to grammar, spelling, and the organization of your review because 5 of the 15 points will be based on how well you write. NOTE: You must turn in a photocopy of the article, which will be returned to you when I give back the graded review. I will not accept a review otherwise. This assignment is due on or before Wednesday, February 17th.

Science Journal Article Review (50 points): Find a biology-related article that was published in a science journal within the last 2 years. The PSC library carries many appropriate journals (see list below). Read the article carefully. Then do the following (items 1 and 2 are required; item 3 is optional):

- 1) Summarize the main points of the article in your own words and in a clear and concise manner. The summary is worth 20 points.
- 2) Describe, in detail, how information in the article relates to appropriate information that is presented in the textbook. This must be done in your own words and must include the page numbers of the text to which you refer (otherwise you will get a zero). This part of the paper is also worth 20 points.
- 3) If reading and thinking about the article affects the way you view yourself, others, the world, etc., include a paragraph about your personal response to the article.

Choose a paper or article that appeals to *you*. The review must be 4 to 5 full pages long (double-spaced). Be sure to pay close attention to grammar, spelling, and the organization of your paper because 10 of the 50 points will be based on how well you write. NOTE: You must turn in a photocopy of the article, which will be returned to you when I give back the graded review. I will not accept a paper without a photocopy of the article being reviewed. This assignment is due on or before Wednesday, March 24th.

Suggested journals in the PSC library are listed below. The journals listed in bold type have less technical articles. If you want to review an article from a journal that is not on the list, then you must talk with me about the article and journal beforehand! Failure to do so will result in the loss of 25 of the 50 possible points.

American Scientist
Audubon
Journal of Mammalogy
Journal of Wildlife Management

Natural History
Nature
Science
Scientific American

Laboratory

Quizzes: There will be 5 quizzes in the lab that will cover lab material and, at times, lecture and/or reading materials. The first lab quiz will be worth 10 points, and the remaining four will be worth 20 points each. Quizzes will primarily consist of short-answer questions.

Lecture exams (2):	200
Final exam:	145
Lab quizzes (5):	90
Writing assignments (2):	65

	500 total

Grading Scale: A = 90-100%; B+ = 85-89%; B = 80-84%; C+ = 75-79%; C = 70-74%; D+ = 65-69%; D = 60-64%; F = 59% or below

Attendance Policy: As stated above, students are expected to attend lecture and lab regularly and to arrive punctually. Lectures will not be repeated and one cannot make up a missed lab. Attendance is a privilege and a responsibility represented by not only the student's investment, but also by a significant investment by the State of Nebraska.

Active cell phones are not allowed in lecture or lab without my permission for extenuating circumstances (e.g., first-response on-call, etc.). Please turn off your cell phones prior to entering the lecture or laboratory and leave them off until after you have left the lecture or lab.

Makeup exams/quizzes: Permission to take a makeup exam or quiz must be obtained from the instructor **prior** to the day of the exam/quiz, otherwise you will receive a zero. Leaving a phone or e-mail message does not constitute prior permission. Unless you have personally received permission from me it will not be granted once the exam or quiz has been given. Makeup exams/quizzes: a) must be taken within 1 week of the scheduled test, b) will be given at a time that fits within my schedule (e.g., during office hours), & c) will be in essay format in the case of makeup lecture exams.

Late papers: Each day a writing assignment is late, 5 points will be deducted from the total possible.

Homework Assignments: Homework assignments are for your benefit and will not be graded. Do them in a timely fashion; do not wait until exam or quiz time to cram—cramming will likely cause undue stress and a poor grade.

College's Incomplete Coursework Policy

To designate a student's work in a course as incomplete at the end of a term, the instructor records the incomplete grade (I). Students may receive this grade only when serious illness, hardship, death in the immediate family, or military service during the semester in which they are registered prevents them from completing course requirements. In addition, to receive an incomplete, a student must have completed substantially all of the course's major requirements.

Unless extenuating circumstances dictate otherwise, students must initiate requests for an incomplete by filling out an Incomplete Grade Completion Contract, which requires the signature of the student, instructor, and Dean. The Incomplete Grade Completion contract cites the reason(s) for the incomplete and details the specific obligations the student must meet to change the incomplete to a letter grade. The date by which the student agrees to complete required work must appear in the contract. The Dean, the instructor, and the student receive signed copies of the Incomplete Grade Completion Contract.

Even if the student does not attend Peru State College, all incomplete course work must be finished by the end of the subsequent semester. Unless the appropriate Dean approves an extension and if the student does not fulfill contract obligations in the allotted time, the incomplete grade automatically becomes an F.

College's Academic Integrity Policy

The College expects all students to conduct themselves in a manner that supports an honest assessment of student learning outcomes and the assignment of grades that appropriately reflect student performance. It is ultimately the student's responsibility to understand and comply with instructions regarding the completion of assignments, exams, and other academic activities. At a minimum, students should assume that at each assessment opportunity they are expected to do their own original academic work and/or clearly acknowledge in an appropriate fashion the intellectual work of others, when such contributions are allowed. Students helping others to circumvent honest assessments of learning outcomes, or who fail to report instances of academic dishonesty, are also subject to the sanctions defined in this policy.

Instances of academic dishonesty may be discovered in a variety of ways. Faculty members who assign written work ordinarily check citations for accuracy, run data base and online checks, and/or may simply recognize familiar passages that are not cited. They may observe students in the act of cheating or may become aware of instances of cheating from the statements of others. All persons who observe or otherwise know about instances of cheating are expected to report such instances to the proper instructor or Dean.

In order to promote academic integrity, the College subscribes to an electronic service

to review papers for the appropriate citations and originality. Key elements of submitted papers are stored electronically in a limited access database and thus become a permanent part of the material to which future submissions are compared. Submission of an application and continued enrollment signifies your permission for this use of your written work.

NSCS Board of Trustees Policy 4220 states that each College “. . . will establish a distance learning assessment policy that will include, at a minimum, a substantial culminating experience that is proctored.” Peru State College’s policy is that each course that is offered entirely online will feature a proctored final exam that substantially measures the extent the course’s stated learning objectives are achieved. Online course syllabi will clearly state that, regardless of grades earned previously, the proctored final exam must be passed in order to receive credit for the course. Courses which feature graded site-based activities (e.g., teaching demonstrations) and/or video-taped presentations that occur near the end of the term, and that are designed to substantially assess the achievement of learning objectives, can be considered in compliance with this policy. Project-based capstone and graduate courses utilizing real-time discussions held by web-cam, phone or in person with the faculty member as part of the assessment process can also be considered in compliance with this policy.

Should an occurrence of academic misconduct occur, the faculty member may assign a failing grade for the assignment or a failing grade for the course. Each incident of academic misconduct should be reported to the Dean and the Vice President for Academic Affairs (VPAA). The VPAA may suspend students for two semesters found to be responsible for multiple instances of academic dishonesty. The reason for the suspension will be noted on the student’s transcript.

A faculty member need present only basic evidence of academic dishonesty. There is no requirement for proof of intent. Students are responsible for understanding these tenets of academic honesty and integrity. Students may appeal penalties for academic dishonesty using the process established for grades appeals.

Title IX Compliance Notice

Peru State College is an equal opportunity institution. PSC does not discriminate against any student, employee or applicant on the basis of race, color, national origin, sex, disability, religion, or age in employment and education opportunities, including but not limited to admission decisions. The College has designated an individual to coordinate the College’s nondiscrimination efforts to comply with regulations implementing Title VI, VII, IX, and Section 504. Inquiries regarding non-discrimination policies and practices may be directed to Eulanda Cade, Director of Human Resources, Title VI, VII, IX Compliance Coordinator, Peru State College, PO Box 10, Peru, NE 68421-0010, (402) 872-2230.

Students requesting reasonable accommodation and tutoring services should contact the Center for Achievement and Transition Services (CATS).

Tentative Lecture Schedule

<u>Week of</u>	<u>Topics</u>	<u>Chapters</u>	<u>Papers Due</u>
Jan 11	Introduction; biodiversity; scientific method	1	
Jan 18	Basic chemistry	2	
Jan 25	Basic chemistry cont'd; Biological molecules	2; 3	
Feb 1	Biological molecules cont'd	3	
Feb 8	Cells and cell structure	4	
Feb 15	Energy; cellular respiration	5; 6	2/17: Review 1
Feb 22	Cellular respiration cont'd.; Photosynthesis	6; 7	
Mar 1	Photosynthesis cont'd.; Cellular reproduction	7; 8	
Mar 15	Cellular reproduction	8	
Mar 22	Mendelian genetics	9	3/24: Review 2
Mar 29	Evolution and natural selection	13	
Apr 5	Classification of organisms (Note: No class M, 4/5)	14	
Apr 12	Plant evolution and diversity	16	
Apr 19	Plants cont'd.; Animal evolution and diversity	16; 17	
Apr 26	Animal evolution and diversity cont'd.	17	
May 3	Final Exam: Wednesday, May 5; 1:00 – 3:00		

Tentative Lab Schedule

<u>Date</u>	<u>Lab Exercise</u>
Jan 12	Introduction to lab & lab safety
Jan 19	Microscopy; Quiz
Jan 26	Osmosis
Feb 2	Water quality testing; Quiz
Feb 9	Enzyme action
Feb 16	Plant and animal cells
Feb 23	Photosynthesis
Mar 2	DNA extraction; Quiz
Mar 16	Blood typing
Mar 23	Bacteria and protozoa
Mar 30	Microbes in the environment; Quiz
Apr 6	Classification
Apr 13	Symmetry
Apr 20	Sensory Physiology; Quiz
Apr 27	Homeostasis

Caveat: The above schedules are subject to change in the event of extenuating circumstances. Modifications will be communicated to the students as soon as possible.