

Kennesaw State University
Department of Biological & Physical Sciences
Fall, 2004
Biological Principles I (BIOL 2107)

Monday & Wednesday, 5:00 pm-6:15 pm/ Bldg: SC/ rm: 214
Laboratory, 6:30 pm – 9:15 pm/ Bldg: SC/ rm: 352

Course description and objectives: This course is the cellular course of a two-semester sequence in Biology. The course covers the fundamentals of cell chemistry, cell structure and function, protein and nucleic acids, energy metabolism, cell cycle, and cell communication. The course is designed for science majors and may be beneficial to pre-medical students as well. The course was previously listed as 2201 (Biological Principles II).

Prerequisites: Chemistry 1211/1211 Lab or BIOL 2101 Intro Culture/Methods Biology.

Textbook and Resources: **Biology**. Sixth edition. Campbell and Reece (2002). *Benjamin Cummings*. Materials pertaining to some of the lectures will be distributed during the class.

Instructor: Xueya Hauge Ph.D.

Office: SC 322

Email Address: xhauge@kennesaw.edu

Website Address: <http://science.kennesaw.edu/~xhauge>

Phone: (770) 423-6163

FAX: (770) 423-6625

Office Hours: The students are encouraged to make an appointment with me to discuss their concerns about the course or ask questions. My office hours are 3:30 pm-4:30 pm, Monday and Wednesday. If these time slots are not convenient for you, please e-mail me to make an appointment. I will respond to your e-mail as soon as possible.

Course Attendance Policy: Lecture attendance is essential for success in this class. You are responsible for all lecture materials and any announcements made in class.

Laboratory Attendance Policy: Laboratory attendance is required and will be recorded. Fail to attend labs for two times will result in one half points deduction of the final grade. No make-up report for a missing laboratory. You will not be admitted into a lab 30 minutes past the beginning of the lab.

Laboratory Safety Policy: Students must comply with all safety regulations in the KSU Chemical Hygiene Handbook. Failure to follow these regulations will result in dismissal from the lab. Regulations are outlined in the laboratory manual.

Laboratory Notebook-keeping Policy: You are required to bring a laboratory notebook to the laboratory, and the instructor will review your notebook during each laboratory period. Fail to keep experimental records will result in one half points deduction of the final grade.

Exam Policy: Make-up exams will be given only to students who have excuses, including illness and accidents. You must get a prior approval from the instructor before you can take make-up exams. In case of illness, you must hand in a copy of your doctor's note to the instructor.

Laboratory Report Policy: Late laboratory reports will not receive full credit—5% deduction per hour will be applied to the report that is turned in 4 hours past the due time. The report will not be graded 24 hours past the due time. Copying the laboratory report from other students is not permitted, and will not be graded.

Withdraw Policy: The last day to withdraw without academic penalty is October 18, 2004. Ceasing to attend class or oral notice thereof does not constitute official withdrawal from the course. Students who simply stop attending classes without official withdrawing usually are assigned failing grades. Students wishing to withdraw after the scheduled change period (add/drop) must obtain and complete a withdrawal form from the Academic Service Department in the Registrar' Office.

Advice on Withdraws: "W" grades on your transcript will be a negative factor in evaluating your academic performance. Some professional schools substitute "F" for every "W". Others take a pattern of "W" as a sign that the student is lack of commitment. For all students, we would recommend that your transcript should show few, if any, "W" grade. Even if you have only a few "Ws" when you graduate, you should have an excellent reason for each one of them (sickness, death in the family, etc.).

Enrolment Policy: Only those students who are enrolled in the class may attend lectures, receive assignments, take quizzes and exams, and receive a grade in the class. If a student is administratively withdraw from this course, they will not be permitted to attend class nor will receive any grade for the class.

Electronic Devices: All beepers and cellular phone should be on quiet mode when the class is in session.

Lecture Grading: There will be three exams during the course.

Summary of the lecture scores:

First exam	140 points
Second exam	140 points
Third exam	<u>140 points</u>
Total	420 points

Laboratory Grading: The lab reports contribute approximately 125 points to the lab score. And the lab score contributes ~ 23% (125/545) to the final grade.

Summary of laboratory scores:

Report 125 points

Grade Evaluation:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Academic Integrity: All students are expected to follow the Academic Integrity Policy of Kennesaw State University.

Tentative Class Schedules: Subject to change

WEEK	TOPICS (CHAPTER IN YOUR TEXTBOOK)
August 23, 25:	Introduction / Chemical context of life (2)
August 30:	Carbon and the Molecular Diversity of Life (4)
September 1:	Carbon and the Molecular Diversity of Life (4)
September 6:	Holiday, No Class Scheduled
September 8:	The Structure and Function of Macromolecules: Carbohydrates (5)
September 13, 15:	Lipids/Protein (5)
September 20, 22:	Protein/Nucleic Acids (5)
September 27:	Review Class
September 29:	First Exam
October 4, 6:	Introduction to Metabolism (6)
October 11, 13:	Membrane Structure and Function (8)
October 18, 20:	The Cell/Organelles (7)
October 25, 27:	The Cell/Organelles (7)/Review Class
November 1:	Photosynthesis (10)
November 3:	Second Exam
November 8, 10:	Photosynthesis (10)/Respiration (9)
November 15, 17:	Respiration (continued)/Cell Communication (11)
November 22:	Cell Communication (11)
November 24:	Fall Break, No Class Scheduled
November 29/December 1:	Cell Communication (11)
December 6, 8:	Cell Cycle (12)/Review Class
December 15:	Final Exam 5:00 pm-7:00 pm

Tentative Laboratory Schedules: Subject to change

WEEK	EXERCISE
August 23, 25:	No Lab Scheduled
August 30/September 1:	Lab I. Orientation
September 6, 8:	Holiday, No Lab Schedules
September 13, 15:	Lab II. Instrumentation and Techniques
September 20, 22:	Lab III. Enzymology: Characterizing the Enzyme Alkaline Phosphatase
September 27, 29	Canceled
October 4, 6:	Lab IV. Membrane Function: Membrane Transport Mechanisms
October 11, 13:	Lab Discussion
October 18, 20:	Lab V: Cellular Respiration: Isolation of Mitochondria and Assay of Enzyme
October 25, 27:	Lab Discussion
November 1, 3:	Lab VI. Photosynthesis: Leaf Pigments Extraction/Separation (Part I)
November 8, 10:	Lab Discussion
November 15, 17:	Lab VI. Photosynthesis: Absorption Spectra (Part II)
November 22, 24:	Fall Break, No Lab Scheduled
November 29/December 1:	Lab VII. Microscopy and Its Applications
December 6, 8:	Course Evaluations

Special Dates:

Withdraw: The last day to withdraw without academic penalty is October 18, 2004.

Final exam: Wednesday, December 15, 5:00 pm – 7:00 pm.