

Biology 140 – Principles of Biology II  
University of Tennessee at Martin  
Fall 2008

Course No. 41131, Section 002  
4-5:15 M & W  
HU 121

Instructor: Dr. Ann Gathers

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Office Hours: M 1:00-2:00; T 11:00-12:00; W 9:00-12:00, and TH 2:30-3:30; others by appointment

Prerequisite: CHEM 121; BIOL 130 (recommended)

Course Description: This is an introductory course designed for science majors that investigates cell and molecular biology including biochemical processes, cellular function, genetics, and the biology of microbes. Laboratory experiences include the collection, analysis, and interpretation of cellular and molecular data. The course consists of three, one-hour lectures and one, two-hour lab per week.

Textbook: Biological Science, Freeman, 3<sup>rd</sup> Edition.  
ISBN: 0-3215-4327-0

Lab text: Biology 140 Laboratory Manual, Department of Biological Sciences,  
UT Martin, (2005).

Grading: Students must be enrolled in lecture and lab to receive a grade for the course. The final course grade is determined by lab exam scores (30%) and lecture exam scores (70%).

Lab scores: Determined by your lab instructor.

Lecture scores:

Quizzes	100 (10 out of 12 highest quiz grades)
Exam I	100
Exam II	100
Exam III	100
Exam IV	100
<u>Final Exam</u>	<u>200</u> (1/2 new material + 1/2 comprehensive)
Total	700 points

Exam format may include multiple choice, short answer, and/or diagrams/ identification. **All lectures, assigned readings, and hand-outs are fair testing material. \*\* Bring a No. 2 pencil and a student ID to exams.**

**There are no make-up exams.** In the event that a student misses an exam and the absence is excused, the **student's final exam percentage will replace the missed exam.** If two exams are missed the final exam percentage will be added twice to the student's grades. No more than two missed exams will be replaced by the final exam percentage.

I determine if an absence on the day of an exam is excused. An absence is excused if: 1.) The student notifies me prior to the absence and the absence is warranted (interview, death of family member, doctor's appointment, class field trips, team travel days, etc.), or 2.) in the case of an emergency, the student contacts me within a day of the absence and the absence is deemed warranted.

**In addition to exam grades and lab scores, 12 10-point quizzes will be administered weekly. Quizzes may be in-class or take-home format. At the end of the semester the two lowest quiz grades will be dropped for a total of 100 possible quiz points. Absence on the day of a quiz results in a zero for that quiz. There are no make-up quizzes.**

Grading Scale:

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

Cheating and Classroom Behavior: All students are expected to demonstrate integrity, respect, and consideration as outlined by the 2007-2008 Undergraduate and Graduate Catalog (page 42). Failure to meet these guidelines will result in a course grade of 'F' and a written report will be made to the appropriate dean.

**Cell phones MUST BE turned off during class. No cell phones or electronic devices are to be brought to class on exam days. Use of cell phones during an exam results in a grade of zero for the exam. No caps or hats during exams.**

Attendance: Students are expected to attend all classes and are responsible for lecture information and announcements. I do not provide my own lecture notes to students.

Academic Accommodation: Any student eligible for and requesting academic accommodations due to a disability is requested to provide a letter from the Student Success Center within the first two weeks of the semester.

Tentative Course Schedule:

<u>Day</u>	<u>Date</u>	<u>Subject (tentative)</u>	<u>Chapter(s)</u>
M	Aug. 25	Introduction/ Atoms and Molecules	1, 2
W	Aug. 27	Molecules/ Properties of Water	2
<b>M</b>	<b>Sept. 1</b>	<b>Labor Day/ No Class</b>	
W	Sept. 3	Amino Acids, Primary & Secondary Protein Structure	3
M	Sept. 8	Tertiary & Quaternary Protein Structure	3
W	Sept. 10	Protein Function & Section Review	3
<b>M</b>	<b>Sept. 15</b>	<b>Exam I (Atoms – Proteins)</b>	
W	Sept. 17	Carbohydrate Structure & Function	5
M	Sept. 22	Carbohydrate Function & section review	5
W	Sept. 24	Nucleic Acids Intro/ DNA	4
M	Sept. 29	Nucleic Acids/ RNA	4
W	Oct. 1	Lipids: Structure	6
<b>M</b>	<b>Oct. 6</b>	<b>Exam II (Carbohydrates – Nucleic Acids)</b>	
W	Oct. 8	Lipids: Osmosis, Membranes, & Transport	6
<b>M</b>	<b>Oct. 13</b>	<b>Fall Break/ No Class</b>	
W	Oct. 15	Cell Structure and Function: Prokaryotes vs. Eukaryotes	7
M	Oct. 20	Cell Structure and Function: Lysosomes & Peroxisomes	7
W	Oct. 22	Cell Structure and Function: Nuclear Membrane	7
M	Oct. 27	Extracellular Matrix/ Cell-Cell Interactions	8
W	Oct. 29	Cellular Respiration Intro/ Glycolysis & Krebs' Cycle	9
<b>M</b>	<b>Nov. 3</b>	<b>Exam III (Lipids – Cell-Cell Interactions)</b>	
W	Nov. 5	Krebs' Cycle, Oxidative Phosphorylation, Fermentation	9
M	Nov. 10	Photosynthesis, photosystems, & Calvin-Benson Cycle	10
W	Nov. 12	Cell Cycle/ Mitosis	11
M	Nov. 17	Meiosis/ Mendelian Genetics	12, 13
W	Nov. 19	Genetics, chromosomes, and heredity	13
M	Nov. 24	How genes work/ Transcription & Regulation	15, 16
<b>W</b>	<b>Nov. 26</b>	<b>Thanksgiving Break/ No Class (take-home)</b>	
M	Dec. 1	Translation & DNA Synthesis	16, 14
<b>W</b>	<b>Dec. 3</b>	<b>Exam IV (Cellular respiration – Meiosis)</b>	

Final Exam Date:

<b>TH</b>	<b>Dec. 11</b>	<b>12:45-2:45</b>	<b>Hum 121</b>
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Other Important Dates:

October 10	Midterm Grades
October 11-14	Fall Break
November 26-30	Thanksgiving Break
December 5	Last Day of Class