

**Concepts in Biology**  
**Biology 120 – Fall 1999**  
**Dr. Eloise Carter**  
**Proposed Lecture Schedule**

Aug.	26	Introduction to course; scientific inquiry	1
	28	Biological themes	1
Sept.	31	Ecosystem structure and function; energy flow	37
	1	Ecosystems: nutrient cycling	37
	3	<b>Symbiosis: Carnivorous Plants</b>	37
	6	<i>Labor Day</i>	
	8	Photosynthesis	5
	10	Respiration	6
	13	Evolution	14, 16
	14	<i>Resources and Research - 8:30 a.m. – 9:30 a.m.</i> <i>Meet in the Library Study Room</i>	
	15	Evidence for evolution	14, 16
	17	<b>Exam 1: through evolution</b>	
	20	<b>Symbiosis: Plants and Pollinators</b>	
	22	Cell structure and function	2, 3
	24	Cell membrane and transport	3, 4
	27	DNA chromosomes and cell reproduction	7, 11
Oct.	29	Cell reproduction: mitosis	7
	1	Cell reproduction: meiosis	8
	4	<b>Symbiosis: Cellular Symbionts</b>	
	6	Review of cell biology	
	8	<i>Fall Break</i>	
	11	Mendelian genetics	9
	13	<b>Exam 2: through cell biology</b>	
	15	More genetics	9, 10
	18	Human genetics	10
	20	Genes to proteins: transcription	12
	22	<b>Symbiosis:</b>	
	25	Genes to proteins: translation	12
	27	Application to molecular genetics	13
	29	<b>Symbiosis:</b>	

Nov.	1	Animal physiology: circulation and gas exchange	27, 29
	3	Animal physiology: immune response	28
	5	<b>Symbiosis:</b>	
	8	Animal physiology: digestion and nutrition	30
	10	<b><i>Exam 3: through immune response</i></b>	
	12	<b>Symbiosis:</b>	
	15	Animal reproduction	34
	17	Animal development	34
	19	<b>Symbiosis:</b>	
	22	Plant diversity and evolution	19
	24	<i>Thanksgiving</i>	
	26	<i>Thanksgiving</i>	
	29	Plant form and function	22
Dec.	1	Plant reproduction	24
	3	<b>Symbiosis:</b>	
	6	Review and evaluation	

FINAL EXAM: Monday, December 13, 1999 – 9:00 a.m. – 12:00 noon

**Text:** (purchase at bookstore) Biology: Concepts and Applications, 3<sup>rd</sup> ed.  
Starr, Cecie. Wadsworth Publishing Company. 1996.

(purchase in lab) Laboratory Manual for Concepts in Biology, 3<sup>rd</sup> ed. Morgan, Judith  
Giles. Emory University Press, 1998.

**Lecture:** Pierce Hall Room 102, Monday, Wednesday, and Friday, 9:05 a.m to 9:55 a.m.

**Lab:** Pierce Hall Room 123, Wednesday, 2:00 p.m. – 5:00 p.m.

**Lab Schedule**  
**Biology 120**  
**Fall 1999**  
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Sept. 1	Lab Topic 13: Aquatic Ecology
8	Lab Topic 1: Scientific Investigation
15	Lab Topic 3: Photosynthesis
22	Lab Topic 2: The Microscope; the Cell <b>LAB EXAM 1 (1,3,13)</b>
29	Lab Topic 4: Cellular Membranes and Transport
Oct. 6	Lab Topic 5: Cellular Reproduction – We will have lab!
13	Lab Topic: <i>Field Trip: Atlanta Botanical Gardens</i> (Handout)
20	Lab Topic 9: Animal Diversity <b>LAB EXAM 2 (2,4, 5, ABG)</b>
27	Lab Topic 14: Molecular Genetics
Nov. 3	Lab Topic 11: Circulation and Respiration
10	Lab Topic 10: The Digestive System
17	Lab Topic 12: Reproduction and Development
24	<b>THANKSGIVING BREAK</b>
Dec. 1	<b>LAB EXAM 3 (9,10,12,14)</b>

Laboratory: Pierce 123, 2-5 p.m., Wednesday

Laboratory Manual will be purchased in class.

## GUIDE TO SUCCESS IN BIOLOGY 120

Welcome to Biology 120! Concepts of Biology is designed for students who do not plan to major in biology or continue in a health related field. This course cannot count toward a major in biology, and it is not designed as preparation for BIO 141, Introductory Biology. However, occasionally a student who completes BIO 120 will go on to take 141 and major in biology. This course is a prerequisite for Field Botany (BIO 235) which is for any student interested in ecology and plants. In this course you will learn the basics of biology, including detailed information and the larger concepts within which the details are organized. You will also learn how these basic concepts apply to your health, the environment, and the living world in which you live. This is biology for the rest of your life!

**Studying.** Read the assigned chapters before coming to class. Pay particular attention to diagrams, tables and illustrations. Make a list of terminology and review the major concepts. Your goal is to *preview* the major ideas presented in the chapter and to understand the new terminology. A careful reading of the material, and answering questions at the end of the chapter should follow the lecture.

Plan to work with other students in the class on a regular weekly schedule. Do not merely get together to study the night before an exam. Develop study and review sheets for each topic. Make summary tables to organize complex material. Use these to quiz your study group. Take good notes in class. Develop a system for developing an outline of the lecture, highlighting terminology, potential exam questions and references to handouts. Use your text to develop lecture material and vice versa. Do not fall behind. *Study every day; be disciplined!!*

In BIO 120 it is necessary to demonstrate thinking, as well as memorization. Memorization may be a skill that you mastered in high school, and it is still very important, but it is not sufficient in college. You must be able to demonstrate that you understand concepts and that you can apply them, as well as simply stating them. You will gain experience with this in the classroom, laboratory and on examinations.

One of the most common problems for students in introductory biology is their familiarity with the subject. They are confident that they understand the material and are prepared for a test, because they recognize all the terms, and the concepts make sense. Don't be lulled into thinking that familiarity is the same as knowledge. You will be asked to differentiate between very similar answers, to provide complete, thorough and precise answers. Don't be caught wishing you had really studied!

**Examinations.** The lecture exams will be a combination of multiple choice, short answer and short essay questions. Exams will cover all material covered in lecture in addition to assigned readings in the text. The final examination is comprehensive. Students should feel free to ask questions during the exams about any question which is unclear.

**Writing.** Students will write about current topics in biology and as a component of classroom and laboratory learning. Assignments will be made in class and lab.

**Presentations and Papers.** Students will select an example of **symbiosis** to research and then present their work in class and prepare a research paper. A separate handout will be provided.

**Honor Code.** All examinations and work for credit in this course come under the regulations of the Honor Code. Your signature on your examination attests to your upholding the Honor Code.

**Office Hours.** Wednesday and Fridays, 10:00 to 10:30a.m., students should see the instructor during class to make an appointments for other times.

**Absences.** The policy on absences is provided in a separate handout. Unexcused absences or a failure to follow the procedures outlined in that handout will result in a reduction in your grade. Any questions about absences should be asked immediately.

**Evaluation.** Students are evaluated on their performance in the classroom and laboratory. The assignment of points will be:

300 points	3 lecture exams
150 points	laboratory exams
175 points	final examination
50 points	writing
50 points	papers and presentations

725 points    total

Final grade determination

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

Plus and minus grades are given in this course.

## ABSENCE POLICY - Biology Department

All students are expected to attend all lecture and laboratory sessions. However, emergencies may arise which will necessitate absences from class. Students are allowed 4 cuts in lecture and NO CUTS in lab. Students may only miss lab without penalty in cases of illness, family emergency or a school sponsored event which is cleared with the professor in advance. Students are responsible for all material which is covered in laboratory and lecture. When possible, students will be allowed to "make-up" laboratory material missed due to an excused absence, however, because of the nature of laboratory material, actual "make-up of missed activities is usually impossible.

### PENALTIES

Students who exceed the 4 cut limit in lecture for whatever reasons or have an unacceptable absence from laboratory will have their FINAL grade reduced 5 points per absence. Students who miss 2 labs without acceptable reasons will fail the course (see below).

### LECTURE ABSENCES:

THERE ARE NO EXCUSED ABSENCES FOR LECTURE. Each student may be absent four times without penalty. These four cuts may be used for any reason: illness, studying, travel, family emergency, etc. However, ANY additional cuts will result in grade reduction. USE YOUR CUTS JUDICIOUSLY, e.g. for sick leave only.

### ACCEPTABLE LABORATORY ABSENCES

Although no discretionary absences, i.e. "cuts", are allowed regarding laboratory, on rare occasions, illness, family emergencies, or certain school sponsored events may make it necessary for a student to miss a laboratory session. The instructor MUST be notified prior to the day of the absence in all but the most extreme emergencies.

In all cases, the final decision regarding whether or not an absence is acceptable will be made by the instructor.

AN UNACCEPTABLE ABSENCE FROM LABORATORY RESULTS IN A FIVE POINT REDUCTION IN THE FINAL GRADE. TWO UNACCEPTABLE LABORATORY ABSENCES RESULT IN FAILURE OF THE COURSE.

### MISSED TESTS

Ordinarily, tests cannot be made up, however, this is up to the instructor. If a student misses a test, and the absence is acceptable the missed test will not count either for or against the student. If the absence is not excused the grade will be a zero. Students are cautioned that any excuse for missing an exam will come under severe scrutiny by the instructor. THE INSTRUCTOR MUST BE NOTIFIED PRIOR TO THE TIME OF THE EXAM, AND THE INSTRUCTOR MAKES THE FINAL DECISION REGARDING WHETHER OR NOT AN ABSENCE IS ACCEPTABLE.

Laboratory tests which are missed for a reason that is excused MUST be made up. The instructor must be notified prior to the time of the test.

### RELIGIOUS HOLIDAYS:

Students must notify the instructor one week in advance if they intend to be absent for a religious holiday.

### TARDINESS

Being late to class is rude and distracting. Continued tardiness by any student will result in the assignment of absences and ultimately a reduction in the student's grade. Three tardies equal an absence. The tardy student is responsible for notifying the instructor that she/he entered the classroom late and, therefore, was not absent. The instructor reserves the option of excluding a person from further classroom or laboratory participation if the student is continuously tardy.

Falsification of information regarding absences from class or laboratory will be considered as a breach of academic integrity.

## CLASSROOM AND LABORATORY GUIDELINES

### Department of Biology

- I. Eating and drinking are not allowed in either classrooms or laboratories. Therefore, do not bring food items and beverages to class or laboratory. Remember that the use of tobacco in any form is forbidden in Pierce Hall.
- II. Students are expected to wear appropriate attire in classrooms and laboratories. This certainly includes the wearing of shoes.
- III. Students must be safety conscious at all times but especially in the laboratories. Special procedures will be reviewed during laboratory sessions as needed.
- IV. All students are requested to help with housekeeping in the classroom and laboratory.
- V. In Biology 142, 121, and 122 certain designated dissection specimens may be taken from the laboratory with the instructor's permission. The instructor will identify those specimens which may be removed for study elsewhere. These specimens must be returned on or before the time the instructor announces for their return.
- VI. Except for the exceptions noted above (V) materials may not be taken out of the laboratories. This includes microscopes, microscopic slides, demonstration notes and materials, charts, and all other items which are to be found in the laboratory.
- VII. Violation of any regulation noted in Sections V and VI above will be treated as a breach of academic integrity. Therefore, such violations will be immediately reported to the Honor Council.