

**Concepts in Biology**  
**Biology 120 – Fall 2002**  
**Proposed Lecture Schedule**

**Professor:** Dr. M. Eloise Brown Carter

**Office:** Pierce Hall #105

**Phone:** (770)784-8343

**Office Hours:** Monday and Wednesday 12:45 – 1:30 p.m. Students are encouraged to see the instructor during class to make appointments for other times.

**Lecture Hours:** Monday, Wednesday, Friday 9:35 a.m. - 10:25a.m. **Room:** Pierce 101

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

**Required Text:** (purchase at bookstore) Biology: Concepts and Applications, 5<sup>th</sup> ed.  
 Starr, Cecie. Wadsworth Publishing Company. 2002.

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

Aug.	28	Introduction to course; scientific inquiry	1
	30	Symbiosis and major biological concepts	
Sept.	2	<i>LABOR DAY</i>	
	4	Biological Molecules: carbohydrates, lipids and proteins	2
	6	Cell structure and function	3,4
	9	Cell organization and cell membrane	4
	11	Cell transport	5
	13	<b>Symbiosis: parasitism, commensalisms and mutualism</b>	
	16	Energy and enzymes	5
	18	Photosynthesis	6
	19(Thur.)	<i>Resources and Research</i> 8:15 am - 9:30 am Meet in the Library Study Room	
	20	<b>EXAM 1 (through energy and enzymes)</b>	
	23	Respiration	7
	25	Review and application	
	27	<b>Symbiosis: Plants and pollinators</b>	
	30	Ecosystem structure and function	41
Oct.	2	Ecosystems: nutrient cycling	41
	4	DNA, chromosomes and cell reproduction	8,12

	7	Mitosis	8
	9	Meiosis	9
	11	Case study and applications	
	14	FALL BREAK	
	16	Mendelian genetics	10
	18	<b>Exam 2: (through meiosis)</b>	
	21	Modes of inheritance	10,11
	23	Human genetics workshop	10,11
	25	<b>Symbiosis: Student presentations</b>	
	28	Genes to proteins: transcription	12,13
	30	Genes to proteins: translation	13
Nov.	1	Molecular genetics	14,15
	4	<b>Symbiosis: Student presentations</b>	
	6	Evolution: Charles Darwin	16,18
	8	<b>Symbiosis: Student presentations</b>	
	11	Animal physiology: Circulation and immunity	34,35
	13	<b>Exam 3: (through evolution)</b>	
	15	<b>Symbiosis: Student presentations</b>	
	18	Animal physiology: reproduction	39
	20	Case study and application	
	22	<b>Symbiosis: Student presentations</b>	
	25	Plant diversity and evolution	22
	27,29	THANKSGIVING BREAK	
Dec.	2	Plant Reproduction	28
	4	Plant Workshop	
	6	<b>Symbiosis: Student presentations</b>	
	9	Review and evaluation	

**FINAL EXAM: Thursday, December 12, 2002 - 9:00 am – 12:00 noon**

**Lab Schedule**  
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**Dr. Eloise Carter**

Sept.	4	Lab Topic 1: Scientific Investigation
	11	Lab Topic 2: The Microscope; the Cell
	18	Lab Topic 4: Cell Membrane and Transport
	25	Lab Topic 13: Photosynthesis <b>LAB EXAM 1 (1, 2, 4)</b>
Oct.	2	Lab Topic 13: Aquatic Ecology
	9	Lab Topic 5: Mitosis and Meiosis
	16	Lab Topic 9: Animal Diversity and Symbiosis
	23	Lab Topic 10: Human Genetics <b>LAB EXAM 2 (3, 5, 9, 13)</b>
	30	Lab Topic 14: Molecular Genetics
Nov.	6	Lab Topic 10: Digestive System
	13	Lab Topic 11: Circulation and Respiration
	20	Lab Topic 12: Reproduction and Development
	27	THANKSGIVING BREAK
Dec.	4	<b>LAB EXAM 3 (10, 11, 12, 14)</b>

## 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 **sybiosis** 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.

**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.