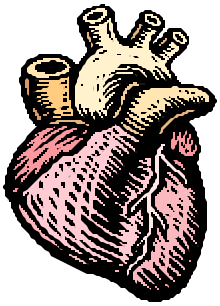
Concepts in Biology
Biology 120 – Spring 2003



Instructor: Dr. Steve Baker
Office: Pierce Hall #117
Phone: 770-784-8446

Office Hours: Tuesday and Thursday 9:30-11:00. Wednesday 3:00-4:30 pm. Students are encouraged to see the instructor during class to make appointments at other times.

Lecture Hours:	MWF 11:45-12:35	Room: Pierce 102
Lab Hours:	Monday, 2:00-5:00	Room: Pierce 125

Required Text: Biology: Concepts and Applications, 5th Edition. Starr, Cecie. Wadsworth Publishing, 2003. (bookstore)

Laboratory Manual for Concepts in Biology, 3rd Edition. Morgan, Judith Giles. Emory University Press. (purchase in lab)

Course Objectives

- Students should gain understanding of the scientific process, scientific inquiry and critical thinking skills.
- Students should gain a basic knowledge of biological concepts such as cellularity, cellular reproduction, energy, genetics, and evolution.
- Students should learn about the basic structure and function of major body systems
- An underlying theme of this course relates to the interruption of body homeostasis by disease; this will be addressed through the addition of relevant clinical topics.

Tentative Lecture Schedule			Chapter
Jan.	15	Introduction to Course, Scientific Inquiry	1
	17	Basic Biology; Are you alive?	1
		Martin Luther King Holiday	
	22	Viruses; Are they alive?	20
	24	Prokaryotes/In-class investigation	20

	27	Eukaryotic Cell Structure and Function	4
	29	Lipids and Membrane Structure	3,4
	31	Cell Transport	4
Feb.	3	*Clinical Issues/Breakdowns in Cell Function*	
		February 3: First writing assignment due	
	5	DNA, chromosomes, and cell reproduction	12
	7	Cellular Reproduction: Mitosis	8
	10	*Clinical Issues/Cancer*	
February 11, Tuesday: Resources and Research, 8:15-9:30 am.			
		Meet in library study room	
	12	Introduction to Sex: Meiosis	9
	14	*Exam 1 - Through Cancer*	
	17	Mendelian genetics	10
	19	Modes of Inheritance	10
	21	*Clinical Issues/Human Genetic Disorders*	
	24	Molecular Genetics and Cloning	15
	26	Putting your genes to work; protein production	13
	28	Changes in genes; evolution and natural selection	16
Mar	3	Evidences for evolution	18
		March 3, Second writing assignment due	
	5	*Clinical Issues/Bacterial Evolution and Antibiotics*	
	7	Systems Overview: Circulation I	34
	17	*Clinical Issues/Coronary Artery Disease*	
	19	Respiration	36
	21	*Exam 2-- Through Coronary Artery Disease*	
	24	Respiratory Disorders	36
	26	Cell Wars: Immunity	35
	28	Parasites and other Symbionts	
	31	Carbohydrates and Cellular Respiration	7
April	2	Digestion	37
	4	*Clinical Issues/ Digestive Disorders*	
	7	Human Reproduction	39
		April 7, Third writing assignment due	
	9	*Clinical Issues/Reproduction Case Study*	
	11	Nervous System- Introduction	30
	14	Brain Anatomy/Sheep Brain Review	30
	16	*Exam 3, through Reproduction*	
	18	Introduction to Ecology--Ecosystems	43
	21	The Driving Force: Photosynthesis	6
	23	Overview of Plant Anatomy	
	25	*Clinical Issues/Medicinal Plants*	
	28	Wrap-up	

The instructor reserves the right to modify this syllabus or the lab syllabus as he deems it necessary.

Additional Course Information:

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.

Papers: One major paper will be required on a topic relating to a human disease or other clinical topic. A handout will be provided to outline specific requirements.

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

Absences: The policy on absences is outlined in a separate handout. Unexcused absences or a failure to follow the procedures outlined in that handout will result in a reduction of your grade. Additionally, tardiness is exceptionally rude and will result in a decreased grade as well.

Evaluation: Students will be evaluated on their performance in the classroom and the laboratory. Points are distributed as follows:

300 points	3 lecture exams
150 points	laboratory exams
175 points	final exam
50 points	research paper
30 points	additional class writings
705 points	total

Plus and minus grades are given in this course.

Lab Schedule
Biology 120
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Dr. Steve Baker

Jan.	27	Lab Topic 1, Scientific Investigation
Feb.	3	Lab Topic 3, Microscope/Cell
	10	Lab Topic 4, Cell Membranes
	17	*Lab Exam 1 (1, 3, 4)* Lab Topic 5, Mitosis
	24	Meiosis, Human Genetics Lab Topic 5, 10
Mar	3	Lab Topic 14, Molecular Genetics
	17	Lab Topic 9, Animal Diversity
	24	*Lab Exam 2 (5, 10, 14, 9)* Lab Topic 11, Circulation and Respiration
	31	Lab Topic 10, Digestive System
Apr	7	Lab Topic 12, Reproduction/Development
	14	Lab Topic 13, Aquatic Ecology
	21	Lab Topic 3, Photosynthesis
	28	*Lab Exam 3 (11, 10, 12, 13, 3)*