

## **BIOLOGY 101- Introduction to Biology** **Spring 2003**

**Meeting:** Parks Hall 146; MWF 9:00-9:50.

**Instructor:** Alejandro Acevedo.

**Office Hours:** MF 11:00-12:00; T 9:00-10:00, 14:00-15:00; W 10:00-11:00.

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**Website:** <http://fire.biol.wvu.edu/acevedo/BIOL101/index.html>

### **Course Description**

This course is a broad survey of biology with special emphasis on its relevance in our everyday lives (*Topics* in the Class Schedule). This course is primarily designed to serve non-science majors but may also serve as a prerequisite for other science courses. I invite and encourage you to participate in the lectures by asking questions and providing examples from your own experiences. Please also feel welcome to provide me with feedback about the course as it progresses.

### **Textbook and Ancillaries**

Cain, M.L., Damman, H., Lue, R.A., and Yoon, C.K. 2002. *Discover Biology, 2<sup>nd</sup> Ed.* Sinauer Associates, Inc. Sunderland, MA. You can use copies of the first edition.

Biology 101 Laboratory Manual. Needed for laboratory portion of the course, sold in the bookstore.

Lecture supplement. These are sketches summarizing the lectures, you can view them and print them in the course web site. I plan to have them available at least the day before class.

### **Laboratory**

The laboratory and the lecture operate independently so think of the lab as another course that focuses on the process of science. You must purchase a laboratory manual before the first lab. The manuals are on sale at the bookstore. You are expected to read the laboratory assignment before you arrive in lab so you are prepared to start as soon as the class begins. Graduate students will be your lab instructors and they will have the help of undergraduate Biology students. They are here to help you learn the material, so please don't be shy about asking them for help.

### **Evaluation and Grading**

There will be three, non-cumulative lecture exams, worth a total of 300 points. Questions on the three exams will be drawn from the textbook, the lecture supplement and what I said in class. Thus, I strongly encourage you to take notes to complement the lecture supplement. The exams will include short answers, matching, true and false, and multiple choice questions so please bring a #2 pencil with you. Another 100 points will be set aside for the lab part of the course; your graduate TA will supply those scores to me. Your final grade will therefore be based on 400 points.

Exam 1 ( <b>Apr 23</b> )	100 points	Exam 2 ( <b>May 14</b> )	100 points
Exam 3 ( <b>TBA</b> )	100 points	Laboratory	100 points

### **Grading Scale**

95% or greater: A	78-81%: B-	66-68%: D+
90-94%: A-	75-77%: C+	63-65%: D
86-89%: B+	72-74%: C	60-62%: D-
82-85%: B	69-71%: C-	below 60%: F

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CLASS SCHEDULE

Week	Date	Lecture	Reading (pp # 2 <sup>nd</sup> edn.)
April 1	W 2	Introduction & Nature of Science.	4-6.
	F 4	Nature of Life.	7-15.
2	M 7	The Chemical Building Blocks of Life (1).	84-90.
	W 9	The Chemical Building Blocks of Life (2).	91-98
	F 11	<i>TOPIC: Nutrition.</i>	468-469, 471-476.
3	M 14	<i>TOPIC: Nutrition and Longevity, Obesity.</i>	468-469, 471-476, notes.
	W 16	The Cell: The Basic Unit of Life.	106-117.
	F 18	Photosynthesis and Respiration: Transfer of Energy.	140-151.
4	M 21	<i>TOPIC: Athletic Performance in Humans and Dolphins.</i>	450-457, notes.
	W 23	<b>Exam 1-</b> Nature of Science through Athletic Performance.	
	F 25	Cell Communication. <i>TOPIC: Stress.</i>	160-164.
5 May	M 28	<i>TOPIC: Immunology and HIV Mode of Attack.</i>	539-543, 548, 534-535, notes.
	W 30	Mitosis: Cell Division.	174-183.
	F 2	Meiosis: Cell Division. <i>TOPIC: Cancer.</i>	190-199, notes.
6	M 5	Genetics: Patterns of Inheritance.	206-217.
	W 7	Human Genetics: Disorders.	224-232.
	F 9	DNA: The Genetic Material. Protein Synthesis.	92-94, 243-246, 255-262.
7	M 12	<i>TOPIC: Genetic Engineering.</i>	289-297.
	W 14	<b>Exam 2-</b> Cell Communication through Genetic Engineering.	
	F 16	<i>TOPIC: Linking All Together: Healthy Lifestyle.</i>	198-199, 468-469, 555, notes.
8	M 19	Classifying Life. Groups of Living Organisms.	20-22, 26-27, 45-55.
	W 21	Marine Life.	56-61, notes.
	F 23	Marine Mammals.	notes.
9	M 26	<b>HOLIDAY!!!</b>	NONE!!
	W 28	Evolution. <i>TOPIC: Human Evolution.</i>	320-327, 390-395, notes.
	F 30	Evolution. <i>TOPIC: HIV and SARS.</i>	334-335, 341, 347, notes.
June 10	M 2	Human Behavior. <i>TOPIC: Kissing and Mate Choice.</i>	586-592, notes.
	W 4	Biodiversity and the Biosphere.	68-77, 652, 657-662, notes.
	F 6	<i>TOPIC: Conservation Biology, Global Warming.</i>	744-749, notes.
	W 11	<b>Final Exam-</b> Healthy Lifestyle through Conservation.	

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April 1	W 2	Introduction & Nature of Science.	4-6.
	F 4	Nature of Life.	7-15.
2	M 7	The Chemical Building Blocks of Life (1).	76-82.
	W 9	The Chemical Building Blocks of Life (2).	82-89.
	F 11	<i>TOPIC: Nutrition.</i>	429-431, 434-437.
3	M 14	<i>TOPIC: Nutrition and Longevity, Obesity.</i>	429-431, 434-437, notes.
	W 16	The Cell: The Basic Unit of Life.	96-107.
	F 18	Photosynthesis and Respiration: Transfer of Energy.	128-138.
4	M 21	<i>TOPIC: Athletic Performance in Humans and Dolphins.</i>	414-421, notes.
	W 23	<b>Exam 1-</b> Nature of Science through Athletic Performance.	
	F 25	Cell Communication. <i>TOPIC: Stress.</i>	146-149.
5 May	M 28	<i>TOPIC: Immunology and HIV Mode of Attack.</i>	486-487, 497, 490-493, notes.
	W 30	Mitosis: Cell Division.	160-170.
	F 2	Meiosis: Cell Division. <i>TOPIC: Cancer.</i>	184-185, notes.
6	M 5	Genetics: Patterns of Inheritance.	193-202.
	W 7	Human Genetics: Disorders.	208-216.
	F 9	DNA: The Genetic Material. Protein Synthesis.	92-94, 243-246, 255-262.
7	M 12	<i>TOPIC: Genetic Engineering.</i>	?
	W 14	<b>Exam 2-</b> Cell Communication through Genetic Engineering.	
	F 16	<i>TOPIC: Linking All Together: Healthy Lifestyle.</i>	?, notes.
8	M 19	Classifying Life. Groups of Living Organisms.	?
	W 21	Marine Life.	?, notes.
	F 23	Marine Mammals.	notes.
9	M 26	<b>HOLIDAY!!!</b>	NONE!!
	W 28	Evolution. <i>TOPIC: Human Evolution.</i>	?, notes.
	F 30	Evolution. <i>TOPIC: HIV and SARS.</i>	?, notes.
June 10	M 2	Human Behavior. <i>TOPIC: Kissing and Mate Choice.</i>	?, notes.
	W 4	Biodiversity and the Biosphere.	?, notes.
	F 6	<i>TOPIC: Conservation Biology, Global Warming.</i>	?, notes.
	TBA	<b>Final Exam-</b> Healthy Lifestyle through Conservation.	