

Biology 102N

General Biological Sciences

M, W, F 2:30 – 3:25 P.M.
LC-18

Instructor: Dr. Jeffrey L. Travis
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Office: Biology 113
Office Hours: M, W: 9:30 - 10:30 P.M. and by appointment

Textbook: Johnson, George B.: *The Living World* (Third Edition) 2003. McGraw-Hill Publishing
ISBN: 0-07-234720-1

GENERAL INFORMATION:

1. General Education Course.

Bio 102N is a General Education Course. It fulfills credit in Category “N = Natural Sciences”

2. Characteristics of the General Education Program

- General education offers explicit understandings of the procedures and practices of disciplines and interdisciplinary fields.
- General education provides multiple perspectives on the subject matter, reflecting the intellectual and cultural diversity within and beyond the University.
- General education emphasizes active learning in an engaged environment that enables students to become producers as well as consumers of knowledge.
- General education promotes critical thinking about the assumptions, goals, and methods of various fields of academic study and the interpretive, analytic, and evaluative competencies central to intellectual development.

3. Learning Objectives for General Education Natural Science Courses

(Developed by Focus Group of the University at Albany faculty)

Natural Science courses enable students to demonstrate:

- (a) an understanding of the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence
- (b) an understanding of the application of scientific data, concepts, and models in the natural sciences
- (c) an understanding of the major principles and concepts that form the basis of the knowledge covered
- (d) command of the relevant terminology appropriate for basic discourse in the particular discipline or disciplines of the course
- (e) that they have become more knowledgeable consumers of scientific information and are
- (f) that they are prepared to make informed decisions on contemporary issues involving scientific information acquired in the course.

4. How Bio 102N complies with the learning objectives of the General Education Program

Biology 102N serves as a comprehensive introduction to the major concepts in the Biological Sciences by presenting a survey of the common structures and processes of all organisms, including humans, and their functions at the molecular, cellular, organismal, and population levels. Emphasis is placed on the principles of inheritance, physiology, evolution, and ecology as they relate to human society. Biology 102N will discuss the scientific method and its applications in the investigation of the biological world.

Bio 102N is a course specifically designed for students who are not majoring in Biology or any of the other natural sciences. As an introductory course, Bio 102N will present a broad overview of the fundamental concepts that define our current understanding of the Biological Sciences and which will form the framework for continuing expansion of this understanding in the future. As such, this course will attempt to indoctrinate students with a command of the relevant biological terminology necessary to comprehend basic biological issues that they are likely to encounter in their post-university life.

GRADING

The Students' course grades will be determined on the basis of performance on:

Four (4) equally weighted (100 points each), non-accumulative EXAMS.....	400 pts
Ten (10) equally weighted (20 points each) weekly QUIZZES.....	200 pts

The **Optional** Final Exam can be used to substitute for any of the four Examinations

There will be no makeup exams or quizzes without a signed Physician's Note or authorized permission from the Dean of Undergraduate Students. Students who miss an exam will receive a grade of 0 (zero) for that exam. These students may use their grade on the Cumulative **Optional Final Exam** to substitute for the missed exam.

Students will note that both the Fourth Exam and the **Optional Final Exam** will be held in LC-18 on Friday May 7, 2004, between the hours of 10:30 A.M. and 12:30 P.M. All students must take the Fourth Exam given from 10:30 A.M. – 11:30 P.M. Students electing to sit for the Optional Final will remain in the exam room and take the *Optional Final* between 11:30 and 12:30.

Please Note: The **Optional Final Exam** can not be used to substitute for missed Quizzes. Quizzes missed as a result of unexcused absences will be entered as a grade of 0 (zero).

Course grades will be determined on the students accumulated total of the 600 points available from their 4 exams and 10 Quizzes. The Grade Requirements are:

<u>Total Points</u>	<u>Grade</u>
540 +	A
521 – 539	A-
500 – 519	B+
480 – 499	B
460 – 479	B-
441 – 459	C+
420 – 439	C
391 – 419	C-
371 – 390	D+
351 – 370	D
330 – 350	D-
<330	E

Class Schedule for the Spring 2004 Semester

Lecture Schedule:

	<u>Date</u>	<u>Day</u>	<u>Lecture Topic</u>	<u>Reading*</u>
Jan	21	W	Introduction: The Science of Biology	Ch. 1
	23	F	The Chemistry of Life. I	Ch. 3
	26	M	The Chemistry of Life. II	Ch. 3
	28	W	Cells. I.	Ch. 4
	30	F	QUIZ 1; Lecture: Cells. II	Ch. 4
Feb	02	M	Energy and Life. I	Ch. 5
	04	W	Energy and Life. II	Ch. 5
	06	F	QUIZ 2; Lecture: How Cells Divide: Mitosis	Ch. 6, (pp 135-148)
	09	M	Meiosis and Sexual Reproduction; Genetics	Ch. 6, (pp 149-159)
	11	W	FIRST EXAM	
	13	F	No Class	
	16	M	No Class	
	18	W	Foundations of Genetics I.	Ch. 7
	20	F	QUIZ 3; Lecture: Foundations of Genetics. II.	Ch. 8
	23	M	How Genes Work. I.	Ch. 8
	25	W	How Genes Work. II.	Ch. 8
	27	F	QUIZ 4; Lecture: The Brave New World of Genomics	Ch. 9 and 10
Mar	01	M	Evolution and Ecology	Ch. 2
	03	W	Evolution and Natural Selection. I.	Ch. 11
	05	F	Evolution and Natural Selection. II.	Ch. 11
	08	M	SECOND EXAM	
	10	W	How We Name Living Things	Ch. 12
	12	F	QUIZ 5; Lecture: The First Single-Celled Creatures	Ch. 13
	15	M	The Advent of Eukaryotes	Ch. 14
	17	W	Evolution of Multicellular Life	Ch. 15
	19	F	QUIZ 6; Lecture: Plant Form and Function. I.	Ch. 17
	22	M	Plant Form and Function. II	Ch. 17
	24	W	Plant Reproduction	Ch. 18
	26	F	QUIZ 7; Evolution of Animal Phyla. I	Ch. 19
	29	M	Evolution of Animal Phyla. II.	Ch. 19
	31	W	THIRD EXAM	
Apr	02	F	No Class	
	05	M	No Class	
	06	W	No Class	
	09	F	No Class	
	12	M	Vertebrate Evolution; Human Evolution	Ch. 20, and 21
	14	W	The Animal Body and How It Moves	Ch. 22
	16	F	QUIZ 8; Lecture: Circulation and Respiration	Ch. 23

	19 M	Path of Food Through the Body	Ch. 24
	21 W	The Defense Department: Guarding Your Security	Ch. 25
	23 F	QUIZ 9; Lecture: The Nervous System	Ch. 26
	26 M	The Endocrine System	Ch. 27
	28 W	The Reproductive System	Ch. 28
	29 F	Quiz 10; Lecture: Ecosystems	Ch. 29
May	03 M	Living In Ecosystems	Ch. 30
	05 W	Planet Under Stress	Ch. 31
	07 F	FOURTH EXAM 10:30 – 11:30	
		<i>Optional</i> FINAL EXAM 11:30 – 12:30	

- ❖ Please note that while the textbook provides the major reading assignments, the instructor will assign additional Readings during the course of the semester.