



General Biology for Non-Science Majors

Bio 100: Spring, 2011

Jeff Johnston, M.Ed



Course Information

Day/Time: Monday & Wednesday, 5:30 p.m. – 6:45 p.m.

Location: WNC, Carson Campus.

Mondays: Room BRIS 329, Wednesdays: Room 317 CED

Credits: 3 **Section:** C03 **Call #:** 13030

Office Hours: Upon request. We can arrange time before or after class, online, or over the phone.

Telephone/Email: (cell) 775-297-5691 / scicordspam@gmail.com

Division Chair: Dr. B. Dillet, 775-445-4442 / bdillet@wnc.edu

Catalog Course Description

Covers fundamental concepts and theories of life science. Major topics include cellular/molecular biology, anatomy, physiology, genetics, evolution and ecology. Includes four laboratory experiences.

Prerequisites

MATH 120 or MATH 126 or higher or consent of instructor.

Transfer Information

This course is designed to apply toward a WNC degree and/or transfer to other schools within the Nevada System of Higher Education, depending on the degree chosen and other courses completed. It may transfer to colleges and universities outside Nevada. For information about how this course can transfer and apply to your program of study, please contact a counselor.

Course Objectives

- Gained factual knowledge (terminology, classifications, methods, trends) about General Biology for Non-Science Majors.
- Learned fundamental principles, generalizations, or theories of General Biology for Non-Science Majors.
- Learned to apply course material (to improve thinking, problem-solving, and decisions) in General Biology for Non-Science Majors.
- Developed specific skills, competencies and points of view needed by professionals in the field most closely related to General Biology for Non-Science Majors.
- Acquired an interest in learning more by asking questions and seeking answers about General Biology for Non-Science Majors.

Course Materials

Required Texts: Biology Science for Life with Physiology, 3rd edition
by Colleen Belk & Virginia Borden Maier
Benjamin Cummings / Pearson
ISBN: 0-321-55958-4 (10-digit ISBN)
978-0-321-55958-6 (13-digit ISBN)

Additional Materials:

1. Scientific calculator. (The basic model. You should not spend much more than \$20.00)
2. Notebook paper and a binder to keep things organized. A spiral binder for recording class notes is strongly recommended.

Please bring your textbook, calculator and binder to every class session.

Course Grading and Attendance

This course is built around the following five major units:

- Chemistry & Cells
- Genetics
- Evolution
- Ecology
- Animal Structure and Function

Through class lecture, assigned reading, group discussion, demonstrations, simulations and laboratory investigations, students will be introduced to basic, fundamental principals of modern Biology. This class will provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology.

The goal of the course is to connect real world events and experiences with topics discussed in class. Most lessons begin with a brief discussion of current events taken from the pages of various science journals, research papers, and/or populatr publications. Near the end of the semester, students are required to research a topic from the news that was part of the Biology 100 curriculum.

Roughly 20% of the course content will be gained directly from the nightly reading assignments. It is therefore very important that you complete the reading assignments on time.

Assignments & Assessment *(subject to change)*

	<u>Points</u>
• 2 midterm examinations (75 points each)	150
• Final Examination	150
• 3 Laboratory Reports (20 points each)	60
• In-class Concept Checks (5 points each)	100
• Science in the news report	20
• Concept Review Questions from Readings (10 points each)	200
• Miscellaneous assignments.	70

750 Total

Attendance Policy

You are expected to attend all classes and are responsible for learning what was discussed and assigned during any class you may miss. Don't fall behind! Homework is assigned every night and collected at the start of each class.

Much of what is learned in this course comes from activities and in-class discussion. Notes or class readings do not always convey the same learning that transpires in class. You are awarded points for completing short, in-class discussion questions. To earn these points, you must attend class.

The maximum allowable absence for this course is two class “hours” (100 minutes) for each class credit. Therefore, the maximum absences for our class that meets twice a week for 75 minutes is four, (or 300 minutes). Students with excessive absences may be reported to the Registrar's Office.

If you miss over 4 classes, or 300 minutes of class time, you may fail this class.

If you know in advance that you will miss all or part of this class, contact the instructor immediately to learn what topics and assignments you will be missing. (The fastest way to contact the instructor is by texting his cell.) In this way, you will remain caught up for the next class. If you know you will miss class on the day of a test, you can take the exam in advance for full credit. If you are absent for the midterm examination, you can earn only half credit on the make up exam.

Late Work

Any late work loses 20% of its value each day that it is late. Late work will not be accepted beyond three days past the due date. Most late work should be submitted electronically. If you know an assignment will be completed late, please contact the instructor as soon as possible through e-mail or texting.

Class Changes

The instructor retains the right to change the syllabus as the semester progresses. Students will be contacted whenever there is a change in schedule.

Grading Scale

A = 93 – 100%	B = 83 – 86%	C = 73 – 76%	D = 63 – 66%
A- = 92 – 90%	B- = 80 – 82%	C- = 70 – 72%	D- = 60 – 62%
B+ = 87 – 89%	C+ = 77 – 79%	D+ = 67 – 69%	F = below 60%

In an effort to help students successfully complete this course, the Counseling office on campus asks faculty for names of students they feel may be in need of additional assistance. A counselor may contact you to offer some ideas on how you might successfully complete your course of study.

Administrative Requirements

Missing Class

If you cannot make class, find out what you missed as soon as possible, so that you will be able to turn in the current assignment on time (at the start of the next class). If you know you will miss class in advance, be sure to get the assignment due to me by dropping it off at the campus, faxing it to 782-2415, or e-mailing it to me as a scanned PDF. If you know that you must miss class on the day of a test, you can take the exam in advance for full credit. If you are absent for any midterm examination, you can earn only half credit on the make up exam. Please refer to the “Attendance” policies stated in this syllabus.

Class Participation, Preparation & Conduct

This is a college-level course where students are expected to behave in a responsible, mature manner. If you arrive to class late, fail to complete assignments, or come to class unprepared, your grade will suffer. Please observe appropriate cell phone etiquette by storing your phone out of site in the “off” or “airplane mode” setting during the entire class time. (If there is a compelling reason why you may need to have your phone active during class, please talk with the instructor.)

No food is allowed during laboratory investigations held in BRIS 329.

Class Changes/Cancellations

Every effort will be made to contact students in the event of a class cancellation (usually by a cell text). During inclement weather, please access the WNC website, or local news sources for campus closures.

The instructor retains the right to change the syllabus as the semester progresses. Students will be contacted whenever there is a change in schedule or policy.

Plagiarism and Cheating

Plagiarism involves directly quoting, summarizing, or paraphrasing the work of others without specific indication of sources, or handing in work that is not the student's own. Cheating is the unauthorized giving or receiving of information in examinations or other exercises. The grade of "0" or "F" will be given for any assignment in which plagiarism or cheating is discovered.

Students with Disabilities

If you have a disability for which you will need to request accommodations, please contact the Disability Support Services office (Bristlecone building, Room 103) as soon as possible to arrange for appropriate accommodations.

Tentative Class Schedule (subject to change)

	Dates	Book Sections	Content Topics
1	Jan. 24, 26	Chapter 1 Section 2.1	Course overview. Defining "life"? The process of science. Chemistry of life.
2	Jan. 31 Feb. 2	Chapter 2	Introduction to Organic Chemistry. Ionic/Covalent bonding, Structure and function of macromolecules Cell classification
3	Feb. 7, 9	Chapter 2 & 3	Lab 1: Cell observation Cell structure & function. Diffusion through a semi-permeable membrane (3.3). Egg home lab.
4	Feb. 14, 16	Chapter 4	Cellular respiration & photosynthesis. Midterm Review.
5	Feb. 23	Chapters 1-4	Midterm Examination 1
6	Feb. 28, March. 2	Chapter 5	Cell cycle. Mitosis. Meiosis
7	March. 7, 9	Chapter 5, 6	Lab 2: Mitosis. Mendelian & quantitative genetics.
8	March. 14, 16	Chapter 6 Chapter 7 Chapter 8	Heredity, genetic variation, and natural selection. Patterns of Inheritance Gene Expression, Mutation, and Cloning
9	March. 21, 23	No class	Spring Break

	Dates	Book Sections	Content Topics
10	March. 28, 30	Chapter 9 Chapter 10	Lab 3: Genetics Change over time: An introduction to Evolution Theory (What Darwin Never Saw).
11	April. 4, 6	Chapters 9, 10 Chapter 18	Lab 4: Evolution through Natural Selection: The Marine Iguana Evolution and Immunity
12	April. 11, 13	Chapters 16 Chapters 5-10	Animal Structure & Function: Tissues & Organs, Organ Systems Midterm Examination 2
13	April. 18, 20	Chapters 17 & 18	Animal Structure & Function: Respiratory & cardiovascular, excretory
14	April. 25, 27	Chapters 19, 20	Animal Structure & Function: Skeletal, muscular, reproduction
15	May. 2, 4	Chapter 11, 12	Biodiversity & Classification
16	May. 9, 11	Chapters 13, 14, 15	Ecology
17	May. 16, 18		Final Examination