

Principles of Biology: BIOL 180 A, Fall Semester 2013

Instructor: Dr. Brian R. Maricle
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Office Hours: Mon and Wed 9:30 - 10:30 am, Fri 1:30 - 2:30 pm, or by appointment
Class Website: www.fhsu.edu/biology/brmaricle/biol180/ (study guides here!)
Lecture Times: MWF 8:30 am - 9:20 am, Rarick 301
Lab Times: Mon 12:30, 2:30, and 6:00 pm; Tues 8:30, 10:30, 12:30, and 2:30, Albertson 245
Textbook: Reece, J.B., M.R. Taylor, E.J. Simon, and J.L. Dickey. 2012. *Campbell Biology: Concepts and Connections*, seventh edition. Pearson Benjamin Cummings, San Francisco. ISBN 978-0-321-69681-6

Catalog Description

Biological principles common to both plants and animals: physiochemical bases of life from molecular to organismal levels; interactions of organisms and environment; concepts of genetics and evolution.

Course Description

Biology is the scientific study of life. This very broad discipline can be broken into many areas, including physiology, morphology, anatomy, systematics, cell biology, genetics, molecular biology, ecology, and evolution. In this class, we will sample most of these areas of biology, and provide building points for future courses in the biological sciences.

Course Objectives

- Gain an understanding of fundamental principles of biology
- Provide a foundation upon which a student can expand his/her knowledge in the science of biology
- Develop critical thinking skills about topics relating to biology

Course Structure and Grading

Lectures are MWF 8:30 am - 9:20 am in RH 301. Lecture is 3 credit hours. There will be five 100-point lecture exams, plus 50 points of comprehensive material with Exam 5 (550 total points). Assignment of grades will be based on:

A	=	90 - 100%	=	495 - 550 points
B	=	80 - 89.9%	=	440 - 494 points
C	=	70 - 79.9%	=	385 - 439 points
D	=	60 - 69.9%	=	330 - 384 points
U	=	0 - 59.9%	=	0 - 329 points

No extra credit work will be available. Use your available time to prepare for the regular lab and lecture assignments. If an exam is missed due to an **unavoidable** conflict (illness, university-sponsored activity, weddings, funerals), and the instructor is notified **prior** to the exam, a make-up exam may be rescheduled.

A make-up exam will not be given unless arrangements are made prior to the regularly-scheduled exam. This includes absences related to sickness, school-sponsored events, or other excusable absences. Make-up exams are given at the discretion of the instructor and may be in a format different from regular exams.

A grade of "incomplete" will not be given except in extreme situations during or near finals week (e.g., hospitalization, death in family). If this applies to you, please contact the instructor to discuss the possibility of receiving an incomplete.

Late work is not accepted for any assignment in lecture or lab. If a class must be missed, it is the student's responsibility to get assigned work handed in **before** the due date.

Academic Dishonesty

Strict adherence to FHSU policies will be maintained. In this course, a confirmed case of academic dishonesty (cheating or plagiarism) will result in immediate expulsion from the course and a grade of "U." The particulars of the offense will also be immediately forwarded to the Provost, who will likely take further (more serious) action. Consult the University Catalog for full details (<http://web.fhsu.edu/universitycatalog/gen/academichonesty2.asp>).

Attendance

A strong correlation exists between lecture attendance and grades. It is your responsibility to make it to lectures and to learn the material associated with the course. Excused absences include school-sponsored events, verifiable illness, or death in the immediate family. It is the student's responsibility to contact the instructor regarding class absences for these events.

Your success in college is in your own hands. Upon entering college, many students struggle until they develop an effective individual learning strategy. Many resources are available to help (library, Kelly Center, internet resources, study groups, etc.), but each student will normally need to establish his/her own system to succeed. Students often must develop a new sense of independence to master college classes. Your instructors and TAs can present you with materials, answer questions, and coach you along the way, but only YOU can learn.

Other Policies

Talking during lecture or any other form of disruption is unacceptable. There are other students enrolled in the class who are trying to listen. Most of them have worked hard and paid a lot of money to be here. Please respect their right to listen.

Please set cell phone ringers for silent mode. Politely leave the room if you must make or receive a call.

Students suspected of being under the influence of alcohol or drugs will be removed from the class. These instances will be reported to the Student Affairs office; students are not allowed back into class until the necessary arrangements are made through Student Affairs. This policy is necessary to meet our legal obligation to provide an alcohol- and drug-free workplace.

Harassment or discrimination of individuals on the basis of race, religion, age, nationality, marital status, veteran status, gender, sexual orientation, or physical or mental disabilities will not be tolerated. Students who witness such action or feel they are being subjected to harassment are asked to discuss the problem with the instructor or report it to the university's Director of Affirmative Action.

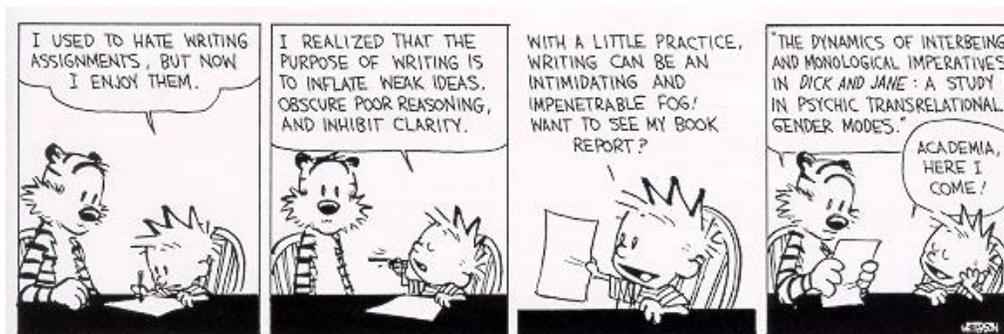
Please feel free to ask questions. The most effective learning environments are those that include a two-way exchange of ideas and concepts between instructor and students.

Students with Disabilities

If you have a disability that may have an impact on your ability to carry out assigned course work and if you wish to seek any accommodations for this course, contact Services for Students with Disabilities (SSD). SSD is located in the Kelly Center, Picken Hall, Room 111, 785-628-4401. SSD will review your documentation and determine, with you, what academic accommodations are necessary and appropriate for you that can be accommodated in this course. All information and documentation of your disability is confidential and will not be released by SSD without your written permission.

Tentative Lecture Schedule: Fall 2013

Week	Dates	Lecture Topic (Textbook Chapters: Campbell et al., 2012)
1	Aug 19-23	Course Overview and Introduction; Scientific Method (1)
2	Aug 26-30	Chemistry of Life (2-3); Tour of the Cell (4)
3	Sep 2	NO CLASS: LABOR DAY
3	Sep 4-6	Tour of the Cell (4); The Working Cell (5)
4	Sep 9	EXAM 1
4	Sep 11-13	The Working Cell (5); Energy Transformation 1: Respiration (6)
5	Sep 16-20	Respiration (6); Energy Transformation 2: Photosynthesis (7)
6	Sep 23-27	Photosynthesis (7); Mitosis and Cell Cycle (8)
7	Sep 30	EXAM 2
7	Oct 2-4	Meiosis (8); Patterns of Inheritance (9)
8	Oct 7-11	Patterns of Inheritance (9)
9	Oct 14-18	DNA and Gene Expression (10-11)
10	Oct 21	EXAM 3
10	Oct 23-25	DNA and Gene Expression (10-11)
11	Oct 28-Nov 1	DNA Technology (11-12)
12	Nov 4-8	Evolution (13-14)
13	Nov 11	EXAM 4
13	Nov 13-15	Evolution (13-14)
14	Nov 18-22	Life on Earth (15-16); Biological Diversity (17-19)
15	Nov 25-29	NO CLASS: FALL BREAK
16	Dec 2-6	Biological Diversity (17-19)
17	Dec 9	EXAM 5 and Comprehensive Final: Monday, 9 December, 8:30-10:10 am



Optional Assignment: BIOL 180A, Fall 2013

You have the option to read a book for an additional assignment in this class. Be advised this is not extra credit; this counts as another 50-point assignment **in addition to** the 550 points in lecture. Thus, doing this assignment well would have the potential of raising your grade. It would also have the potential to lower your grade if it is done poorly.

- 1.) To complete this assignment, first read **one** (1) of the following books:

Alvarez, W. 1997. *T. rex and the Crater of Doom*. Princeton University Press, Princeton, New Jersey.

Dawkins, R. 2009. *The Greatest Show on Earth: The Evidence for Evolution*. Free Press, New York. (Library QH366.2 .D374)

Diamond, J. 1992. *The Third Chimpanzee: The Evolution and Future of the Human Animal*. Harper Collins Publishers, New York.

Houle, M. 1995. *The Prairie Keepers*. Addison-Wesley Publishing Company, Reading, Massachusetts.

Pollan, M. 2002. *The Botany of Desire*. Random House, New York. (Library QK46.5 .H85 P66)

Sagan, C. 1977. *The Dragons of Eden*. Ballantine Books, New York. (Library BF431 .S2)

Watson, J.D. 1968. *The Double Helix*. Signet Books, New York. (Library QD341 .A2 W315)

Weiner, J. 1994. *The Beak of the Finch: A Story of Evolution in Our Time*. Vintage Books, New York. (Library QL696 .P246 W45)

- 2.) 25 points of the assignment will be from a written summary, due one week before our individual meeting (i.e., some time between now and November 22; see below). **In a maximum of one page**, summarize the book. Describe the main points and demonstrate an understanding of these points. Frame these concepts within the greater realm of biology. Grading of this assignment will be based on the quality of the content, and the quality of the writing. A well-written essay will be one that summarizes the main topics of the book, places the content within a broader biological content, and is free of spelling or grammatical errors. Make sure to write concisely to stay within the one-page limit.
- 3.) 25 points of the assignment will come from an individual meeting between you and your course instructor, where we will discuss the book. You are to schedule a 30-minute meeting with your course instructor between the dates of now and December 2. At this meeting, we will discuss parts of the book you liked or did not like. We can also go over parts where you have questions, or discuss points you did not understand. Be prepared to convince your instructor you read and understood the book. Grading of the discussion portion of this assignment will be based on the quality of the discussion, and the ability to demonstrate understanding of the material.