

CASPER COLLEGE COURSE SYLLABUS
BIOL 1010 General Biology I

Semester/Year: Fall 2015

Lecture Hours: 3

Lab Hours: 3

Credit Hours: 4

Lecture Class Time: 9:00-9:50

Days: MWF

Room: PS 103

Lab Class Time and Room: 1-2:50; 3-4:50, M or W, Room LS 210

Instructor's Name: Dr. Will Robinson

Instructor's Contact Information:

Office Phone: 307-268-2359

Email: wrobins@caspercollege.edu

Office Hours: MWF 11:00-11:50 and MW 8:00-8:50

Course Description: Fundamental concepts including basic chemistry, cell structures and functions, tissues, respiration, energy reactions, genetics, molecular biology, population dynamics, and evolutionary theory. Designed for life science majors and pre-professional life science curricula. It is anticipated that students have had one year of high school biology.

Statement of Prerequisites: High school biology recommended, but not required. No prerequisites other than freshman standing.

Goal: After completing BIOL 1010, a student should have a general understanding of biological chemistry, cell biology, genetics and evolution.

Outcomes: A student should demonstrate an understanding of: atomic structure and molecular bonding, elementary organic chemistry, significance of pH, cell membrane properties, enzyme importance and action, glycolysis and cellular respiration, cell division (both meiosis and mitosis), protein synthesis, mechanisms and importance of evolution by natural selection, speciation mechanisms. In line with general Casper College guidelines, a student will also be expected to be able to:

1. Demonstrate effective oral and written communication
2. Use the scientific method
3. Solve problems using critical thinking and creativity
4. Use quantitative analytical skills to evaluate and process numerical data

The degree to which the student achieves these outcomes is dependent upon the student's effort. Grade earned in the class reflects the achievement level. Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work.

Course Objectives: To meet the above-stated goals and outcomes.

Methodology: Whiteboard lectures, handouts, videos, PowerPoint slides, models, field trips and living and preserved specimens are used in lecture and lab to aid in covering basic concepts. Your feedback is valuable as the instructor uses course evaluations in determining course methodology.

Evaluation Criteria: Grade will be based on one lab practical and four lecture exams, all mandatory, plus six lab reports. The lecture exams are worth 100 points each; the practical is worth 100, and the lab reports total 150 points, for a grand total of 650 points. An optional, **comprehensive** final exam may be taken to replace the **lecture** exam on which the student received his or her lowest score. Grades are normally assigned on a percentage basis:

- A 90-100%
- B 80-89%
- C 70-79%
- D 60-69%
- F < 60%

Grades are sometimes slightly curved at the instructor's discretion.

Students will not be directly penalized for missed classes. However, class attendance is absolutely imperative to good performance in the course. It is the responsibility of the **student** to:

1. Obtain missed lecture notes from another student. **I do not make my notes available.**
2. Find out about assigned material.
3. Make up missed labs immediately.
4. Arrange for missed exams to be taken. You must notify the instructor that you will be missing the exam **no later than the morning of the test.** A make-up exam may then be allowed, at the instructor's discretion, within two lecture periods unless the instructor allows a longer time due to length of the absence. Lecture make-ups are usually in essay and objective format.
5. **No make-ups are given for missed lab practical exams,** barring exceptional circumstances.

Highly Recommended Text: *Life: The Science of Biology*, Purves, Sadava et al. 10th ed. I no longer strictly require this book, as many students claim they never use it and complain about the expense. However, I think it, or a similar college-level textbook, is helpful and may be essential to some of you. An earlier edition of the Purves text will also suffice.

Class Policies: Last Date to Change to Audit Status or to Withdraw with a W Grade: November 12, 2015.

Student Rights and Responsibilities: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

Chain of Command: If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head/Program Director, the Dean of the School of Science, and lastly the Vice President for Academic Affairs.

Academic Dishonesty: (Cheating & Plagiarism) Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender's

failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct for more information on this topic.

Official Means of Communication: Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly. This is also where you will find course evaluation links during course evaluation periods.

ADA Accommodations Policy: If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

Calendar indicating course content:

Schedule indicating course content:

Lecture – General Subject Matter

- I. Characteristics of Life; Biological Chemistry; Cell Biology
- II. Physiology; Cell Division; Genetics
- III. Organic Evolution; Speciation

Lecture – Tentative Schedule

<u>Week Beginning</u>	<u>Monday</u>	<u>Wednesday</u>	<u>Friday</u>
8/24	Introduction	Defining Life, Chapter 1	Chemistry, Ch. 2-4
8/31	Chemistry	Chemistry	Chemistry
9/7	HOLIDAY	Chemistry	Cells, Ch. 5
9/14	Cells, Ch. 5	EXAM 1	TBA
9/21	Cytoskeleton, Ch. 5	Cell Membranes, Ch. 6	Mitosis, Ch. 11
9/28	Meiosis, Ch. 11	Enzymes, Ch.8	Glycolysis, Ch. 9
10/5	Glycolysis, Ch. 9	Respiration, Ch. 9	EXAM 2
10/12	Respiration, Ch. 9	Genetics, Ch. 12	Genetics, Ch. 12
10/19	HOLIDAY	Genetics, Ch. 12	Genetics, Ch. 12
10/26	Genetics, Ch. 12	DNA, Ch. 13	RNA, Ch. 14
11/2	Protein Synthesis, Ch. 14	Protein Synthesis, Ch. 14	Advising Day
11/9	EXAM 3	Evolution, Ch. 21, 22	Evolution
11/16	Evolution	Evolution (video)	Natural Selection Ch. 21-22
11/23	Natural Selection C. 21-22	HOLIDAY	HOLIDAY
11/30	Natural Selection	Speciation	Speciation
12/7	Evolution video	EXAM 4	Review
12/14	Optional Final		

LABORATORY:

<u>DATE</u>	<u>SUBJECT</u>
8/24, 8/26	NO LAB
8/31, 9/2	Rabbitbrush Ecology (Report required)
9/7, 9/9	HOLIDAY—NO LAB
9/14, 9/16	Garden Creek Ecology (Report)
9/21, 9/23	Natural History (Report)
9/28, 9/30	Microscope Use
10/5, 10/7	Cells & Cell Division
10/12, 10/14	Lab Practical—Microscopes and Cells
10/19, 10/21	HOLIDAY—NO LAB
10/26, 10/28	Tate Museum Visit
11/2, 11/4	Tate Museum Visit (Report)
11/9, 11/11	Evolution (Report)
11/16, 11/18	Co-evolution/ecology (Report)
11/23, 11/25	HOLIDAY- NO LAB
11/30, 12/2	NO LAB
12/7, 12/9	NO LAB

Note: I will announce in class the due date for the Tate Museum report.