

**Early College Program**

Idaho State University-Preston High School

BIOL 1101- Biology I, Fall Semester 2012

Monday & Wednesday 3rd period

**Instructor**: Heidi Luke

**Office/Room**: Room 507

**Office Hours**: 7:30-8:00 a.m. & 3:22-4:30 p.m.

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**Name of Text Used**: Sadava, D., [et al.] (2008). Life, the Science of Biology, 8th ed. Sinauer Associates, Sunderland, MA.

**Course Description**: **BIOL 1101 Biology I 4 credits.** Major concepts in biology with an emphasis on the acquisition of new knowledge, cell structure and function, principles of inheritance, and evolution. This course is for students majoring in the biological sciences. Lectures, laboratories. With BIOL 1101L, satisfies Goal 4 of the General Education Requirements. F, S

**Course Objectives**: Upon completion of the course, the student should have sufficient knowledge of and be able to:

* Understand the vocabulary and basic concepts of the following disciplines in biology: biological molecules, cell biology, energetics, reproduction and heredity, molecular genetics, evolution, ecology, and the global environment.
* Explain the basic biological concepts in writing, using scientific terminology.
* Begin the process of developing critical thinking skills, that is, recognize and evaluate evidence, and use it to solve problems.
* Use the vocabulary and basic concepts you have mastered as a foundation for more advanced biology courses.

**Weekly Agenda**:

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| --- | --- | --- | --- |
| **Month** | **Chapter(s)** | **Class Topic** | **Lab Topic** |
| August 27 | Ch. 1  | Studying Life | Scientific Method |
| August 29 | Ch. 2 | Elements, bonding, reactions |  |
| September 5 | Ch. 2 | Properties of Water | Chemistry |
| September 10 | Ch. 3 | MacromoleculesProteinsCarbohydrates |  |
| September 12 | Ch. 3 | LipidsNucleic Acids | Macromolecules |
| September 17 | Ch. 4 | Cells |  |
| September 19 | Ch. 5 | Membrane Structure | Cells  |
| September 24 | Ch. 5 | Transport |  |
| September 26 | EXAM I |  | Membranes |
| October 1 | Ch. 6 | Energy Transformation; ATP |  |
| October 3 | Ch. 6 | Enzymes | Energy & Enzymes |
| October 8 | Ch. 7 | Aerobic Pathways |  |
| October 10 | Ch.7 | Anaerobic Pathways | Respiration & Fermentation  |
| October 15 | Ch. 7 | Cellular Respiration | Photosynthesis & Respiration |
| October 17 | Ch. 8 | Photosynthesis |  |
| October 22 | Ch. 9-10 | Mitosis/Meiosis | Cell Division |
| October 24 | Ch.9-10 | Mitosis/Meiosis |  |
| October 29 | Ch. 10 | Genetics | Mendelian Genetics |
| October 31 | Ch. 10 | Genetics |  |
| November 5 | Ch. 11 | Structure & function of DNA | DNA Structure & Function |
| November 7 | EXAM II |  |  |
| November 12 | Ch. 11-12 | DNA to Protein |  |
| November 14 | Ch. 12 | Mutations | Molecular Biology |
| November 19 | Ch. 12  | Mutations | Mutation Lab |
| November 26 | Ch. 22 | Evolution |  |
| November 28 | Ch. 22 | Evolutionary Mechanisms | Microevolution |
| December 3 | Ch.22 | Human Influence on Evolution |  |
| December 5 | Ch. 23 | Species & Their Formation |  |
| December 10 | Ch. 23 |  |  |
| December 17 | EXAM III |  |  |
| January 2 | Ch. 54 | Population Ecology | Ecology |
|  | Ch. 54 | Factors that Influence Populations  |  |
| January 7 |  | FINAL EXAM |  |

**Course Expectations**:

At all times, to contribute positively to the learning environment:

* Respect, listen to, and support each other. Science works best when done collaboratively.
* Come to class on time, prepared to participate, learn, and succeed.
* Exhibit responsible behavior and attention to safety.
* Abide by the University Stands of Academic Integrity.
	+ Dishonest conduct is unacceptable. In cases of academic dishonesty, such as cheating or plagiarism, students will be dismissed from class, given failing grades or otherwise disciplined by the faculty member. Before students are allowed to repeat the course, they must submit a petition to, and obtain approval from the Scholarship Requirements Committee or the designated official of the college having jurisdiction over the course. Faculty members are responsible for deciding academic dishonesty cases which occur in their classes, except when a case involves additional violation of University policies. Such other violations may be resolved under the Student Code of Conduct, Rights, Responsibilities and Judicial Structure or other applicable procedures. ([www.isu.edu/refernces/fs.handbook/](http://www.isu.edu/refernces/fs.handbook/)>.)

Students are expected to be motivated, independent learners seeking help as needed. Plan on spending **45-90 minutes per night** if you hope to be successful in this course. You will generally be reading at least 2 chapters a week! The reading load will be heavy, but it is imperative that you keep up. I strongly urge you to come to class prepared by completing the learning objectives for each topic before it is reviewed in class, downloading notes when available, and by participating actively in discussions and lab activities.

**Course Requirements and Assessments**:

*Exams***:** You will have 3 exams throughout the semester. Each exam will consist of 35 multiple choice questions (70 points) and one or two essay questions (10 points).

*Final Exam:*In addition to the 3 exams given during the semester, there will be a final exam (150 points) given during finals week. This exam **WILL BE COMPREHENSIVE** and will cover **all of the material you learned throughout the semester.**

*Homework Assignments:*There will be homework assignments throughout the semester. You will have one week to complete each assignment and it will be turned in by the end of class on the date it is due.

*Abstracts:* An abstract is a summary or synopsis of an article in a journal or magazine. The purpose of preparing an abstract is to acquaint you with scientific literature and to expose you to current topics in biology. Abstracts will be due throughout the semester.

*Quizzes*: There will be a quiz every Wednesday at the beginning of class. These quizzes will cover to most recent material i.e. from the previous week, including the readings. Quizzes will be given late for school excused absences only, and only when arrangements have been made **prior to departure** .

*Missed Exam Policy:*I only give make-up exams to accommodate extreme circumstances, such as illness or a death in the family. In addition, I reserve the right to give a make-up exam consisting of 7 essay questions worth 10 points each (70 points total). If you have a legitimate reason for missing an exam, you must contact me **PRIOR** to exam time to arrange for a make-up. **A student who fails to notify me prior to exam time will not be allowed to take that exam.**

**Grading:**

|  |  |  |
| --- | --- | --- |
| **Assignments** | **Points** | **% of course grade** |
| Exams (100 points each) | 300 | 32% |
| Quizzes (20 points each) | 120 | 13% |
| Homework assignments  | 100 | 10% |
| Labs  | 280 | 29% |
| Final Exam | 150 | 16% |
| Total course points | 950 | 100% |

We will follow the Idaho State University standard grading scale.

A 94-100%

A- 90-93%

B+ 87-89%

B 83-86%

B- 80-82%

C+ 77-79%

C 73-76%

C- 70-72%

D+ 67-69%

D 63-66%

D- 60-62%

F <60

**Student Code of Conduct**: The definitions of cheating and plagiarism were taken directly from the Student Code of Conduct Handbook. Please also refer to the Student Code of Conduct for policies and procedures for handling academic dishonesty. University policy will be followed for each situation.

<http://www.isu.edu/policy/fs-handbook/part6/6_10/6_10b.html>

Definitions:

**CHEATING** is defined as using or attempting to use materials, information, or study aids that are not permitted by the instructor in examinations or other academic work. Examples of cheating include, but are not limited to:

(1) Obtaining, providing, or using unauthorized materials for an examination or assignment, whether verbally, visually, electronically, or by notes, books, or other means.

(2) Acquiring, examinations or other course materials, possessing them, or providing them to others without permission of the instructor. This includes providing any information about an examination in advance of the examination.

(3) Taking an examination for another person or arranging for someone else to take an examination in one's place.

(4) Submitting the same work or substantial portions of the same work in two different classes without prior approval of the instructor.

(5) Fabricating information for any report or other academic exercise without permission of the instructor.

**PLAGIARISM** is defined as representing another person's words, ideas, data, or work as one's own. Plagiarism includes, but is not limited to, the exact duplication of another's work and the incorporation of a substantial or essential portion thereof without appropriate citation. Other examples of plagiarism are the acts of appropriating creative works or substantial portions thereof in such fields as art, music, and technology and presenting them as one's own.

**Penalties for Academic Dishonesty**

(1) Warning: The instructor indicates to the student that further academic dishonesty will result in other sanctions being imposed.

(2) Resubmission of work: The instructor may require that the work in question be redone to conform to proper academic standards or may require that a new project be submitted. The instructor may specify additional requirements.

(3) Grade reduction: The instructor may lower a student's grade or assign "F" for a test, project, or other academic work.

(4) Failing: The instructor may assign "F" for the course.

(5) Failing with notation: The instructor may assign "F" for the course and instruct the Registrar to place notation indicating academic dishonesty on the student's permanent transcript.

**Reasonable Accommodations for Students with Disabilities**: If you have a disability or think you have a disability (physical, learning, hearing, visual or psychiatric) which may need a reasonable accommodation, please contact the Disability Services Office located in the Rendezvous Building Room 125, 282-3599 and in Idaho Falls in the Bennion Student Union, Room 223.

**Evaluation of Course and Instructor:** At the end of the course, evaluations will be given to students for feedback on the course and instructor.