

INSTRUCTOR

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Office hours: 1:30-2:20 Tuesday, 12:30-1:20 Wednesday, or by appointment.

TIME AND PLACE

Lecture: MWF 8:30-9:20 in JEB 104.

Laboratory: All sections meet in LSS 351, during scheduled times. You may only attend the section for which you are registered!

LEARNING OUTCOMES

This course has two objectives. The first objective is to explain and illustrate various aspects of biochemistry and biology that are common to most organisms, and to provide a fundamental understanding of eukaryotic and prokaryotic cell structure and function. Lectures, discussions, and laboratory exercises will explain and illustrate the following aspects of cellular biology:

- * Cell structure and function,
- * Cellular biochemistry and energy conservation mechanisms,
- * Transcription and translation of the genetic code,
- * The cell cycle, meiosis and mitosis, and cell division,
- * Genetic aspects of development.

A second objective of the course is to help students better grasp the mechanisms and consequences of adaptive evolution. Lectures, discussions, and laboratory exercises will explain and illustrate the following aspects of evolutionary biology:

- * Neo-Darwinian evolutionary theory,
- * Mechanisms that give rise to genetic diversity in populations,
- * How natural selection leads to incremental change within species,
- * How interactions among species and between organisms and their environment shape the course of adaptive evolution.

Students who enroll in this course will be expected to be “self-learners” with the discipline and initiative to read, review, listen, discuss and study subject material that is presented in lectures, laboratory exercise, and the textbook. We will assess your understanding of the material by taking on-line quizzes every week. The instructor will guide your studies through overviews presented in lecture and explanatory material presented in the laboratories.

COURSE INFORMATION

This syllabus and other course information and content can be found on Bblearn, url: <http://www.bblearn.uidaho.edu/>. Log in to bblearn with your Vandal user name and password.

LECTURE TEXTBOOK

Campbell's Biology, Ninth Edition. *Reece et al.*, © 2011 Pearson Education, Inc., publishing as Benjamin Cummings, San Francisco, CA. Copies are available for purchase in the Campus Bookstore or from on-line vendors. The instructor will also place two copies of this textbook on 2-hour reserve in the University of Idaho Library. Other learning tools are available through the textbook publisher's website Mastering Biology, but these are *supplemental* (not required).

LABORATORY TEXTBOOK

Symbiosis: the benjamin cummings custom laboratory program for the biological sciences for *Biology 115: Cells and the Evolution of Life*, © 2011, compiled by Bruce Mobarry, and published by Pearson Education, Inc., San Francisco. It is available at the University of Idaho bookstore. Other laboratory exercises will be posted during the semester on Bblearn (<http://www.bblearn.uidaho.edu/>). The instructor will notify you in advance when we will be using posted lab exercises. Laboratory write-ups for Cells & Evolution of Life will be posted online in Bblearn the week of the lab.

LABORATORIES

The laboratory will include one 3-hour session per week. A combination of discussion, laboratory experiments, and homework assignments will be used to illustrate and reinforce the concepts and factual information presented in lecture.

BIONET - ONLINE LECTURES

BIONet provides web-based instruction of the topics covered in BIOL 115. BIONet offers self-paced learning tasks. BIONet is *supplementary* to the lecture and textbook.

ATTENDANCE and PARTICIPATION

Students are strongly encouraged to attend all lectures. Students should complete the assigned reading before the scheduled lecture or laboratory and be prepared to participate in classroom discussions or answer questions when called upon to do so. I will post the lecture presentations on the Bblearn site before each lecture as pdf documents. You may print these out and use them as a basis for taking notes on the lecture. Also, review topics for each exam will be posted on Bblearn before this review, so that you can ask questions in the review session. All students are required to attend and participate in the weekly lab exercises in the lab section for which they are registered. Missed attendances for these activities will result in a loss of points for the course, as described below in the GRADES section.

CHEMISTRY PRE/CO-REQUISITE

Students enrolled in Biology 115 **MUST** have either previously passed or be currently enrolled in Chem 111 or Chem 101 (please talk to your advisor if you are unsure which chemistry course your major requires). If you drop Chem 111 or 101 while you are enrolled in Biology 115, you will **AUTOMATICALLY** be dropped from Biology 115, regardless of your current grade in this course. In addition, the biology department will not add you back into Biology 115 until you are again enrolled in the appropriate chemistry course. **THERE ARE NO EXCEPTIONS TO THIS RULE.**

GRADES

Each student is individually responsible for learning the subject material covered in the course. If you follow the PASS advice (see below) you should be successful, and if you ignore this advice then you should not blame others or be surprised if your grade is less than you had hoped for. Your comprehension of the material presented in the textbook, lectures, labs and supplementary materials will be evaluated based on the following:

Lecture Exams: Four lecture exams worth 80 points each will be given during the semester. Students primarily will be expected to know material from class lectures and the textbook. One comprehensive final exam worth 140 points will be given during Finals Week. This exam will be similar in format to the exams given previously in the semester.

Laboratory exercises: Lab reports are to be turned in during the student's lab period following the week they are assigned, unless otherwise indicated. Late reports will automatically be reduced in value by 5% per day late. Reports that are not typed will be reduced in value by 50%. Students missing a lab or arriving more than 10 minutes late for lab periods without a valid excuse will not receive full credit for lab exercises/reports.

Bblearn Quizzes: Students are responsible for taking the quiz posted on www.bblearn.uidaho.edu every

week outside of class time. Students are allowed three attempts for each quiz. Only the highest score from your attempts will be recorded as your grade for each weekly quiz. As students are allowed an entire week to take each quiz, make-ups are allowed only under exceptional circumstances. The lowest quiz grade of the 16 will be dropped. **PLAN AHEAD TO MAKE SURE YOU DON'T MISS A QUIZ!!**

GRADING POLICIES

Policies on Make-up Assignments: Only students presenting medical or official university excuses to the instructor will be allowed to take a make-up exam, quiz, lab, or make up other missed assignments. Whenever possible, arrangements should be made with the instructor prior to the regularly scheduled exam, lab, or assignment due date. Making these arrangements is entirely the responsibility of the student. Make up exams and quizzes may differ from those given at the regularly scheduled time, and whether an absence is deemed to be excusable is at the discretion of the instructor. Students missing a lab (with a valid excuse) must make up the lab by the end of the week following the missed lab. After this time has elapsed, a makeup for the lab is no longer allowed and the student will receive a score of "0" for the lab report.

IT IS THE STUDENT'S RESPONSIBILITY TO MAKE SURE THAT THEY HAVE A VALID, EXCUSED ABSENCE FOR ANY MISSED EXAMS OR ASSIGNMENTS.

Grammar, Syntax, Spelling, Clarity and Logic: Scores on exams, laboratory reports and other written assignments will be reduced if there are errors in grammar, syntax, spelling, or if ideas are not presented in a clear and logical way. Your score will be markedly reduced if the handwriting is illegible. In science it is crucial to convey information and to express concepts, ideas, and opinions in a manner that is clear, unambiguous and easily understood. Consequently your level of skill in doing so will be one element that determines your grade in the class.

GRADING SCALE

16 quizzes @ 10 points each	= 160 points
4 exams @ 80 points each	= 320 points
Comprehensive final exam	= 140 points
12 labs @ 15 pts ea	= 180 points
TOTAL POINTS	= 800 points

ACADEMIC HONESTY

Academic honesty is governed by Article II of the University of Idaho's Student Code of Conduct <http://www.webs.uidaho.edu/fsh/2300.html>. Cheating on classroom or outside assignments, including examinations is a violation of this code. Forms of academic dishonesty include:

- * Copying answers from neighbors during exams or quizzes.
- * Offering answers to neighbors during exams or quizzes.
- * Using crib-notes during exams or quizzes.
- * Reproducing without crediting the exact words of another writer, including a scientist or classmate (plagiarism), on any class assignment.
- * Turning in work (your own or another's) from previous semesters in place of new assignments.

Incidents of academic dishonesty will be kept on file by the instructor and may be reported to the dean of students. Such instances of academic dishonesty may warrant expulsion from the course and a failing grade. All students should be aware that even one incident of academic dishonesty may also merit expulsion from the University.

CLASSROOM BEHAVIOR

Any behavior that is disruptive to the class or deemed by the instructor or teaching assistants to be disrespectful to fellow students or the instructor will not be tolerated. This includes off-topic conversations with fellow students, sleeping in class, texting, social media, reading newspapers or using cell phones during class

time. Students that violate this rule may be summarily dismissed from class. Repeated violation may result in expulsion from the course and a failing grade for the student.

UNIVERSITY OF IDAHO CLASSROOM LEARNING CIVILITY CLAUSE

In any environment in which people gather to learn, it is essential that all members feel as free and safe as possible in their participation. To this end, it is expected that everyone in this course will be treated with mutual respect and civility, with an understanding that all of us (students, instructors, professors, guests, and teaching assistants) will be respectful and civil to one another in discussion, in action, in teaching, and in learning.

Should you feel our classroom interactions do not reflect an environment of civility and respect, you are encouraged to meet with your instructor during office hours to discuss your concern. Additional resources for expression of concern or requesting support include the Dean of Students office and staff (5-6757), the UI Counseling & Testing Center's confidential services (5-6716), or the UI Office of Human Rights, Access, & Inclusion (5-4285).

STUDY HINTS

Study and review early and often. By doing so, the lectures that follow will be easier to understand (because they are often based on material that has been previously presented) and learning will be much easier. In addition, it is recommended that students spend time with course material before it is presented in class, by reading the textbook, using the Mastering Biology website, and working through BIONet lectures. "Cramming" for an exam is not a terribly effective study strategy.

A "Chapter Summary" can be found at the end of each chapter in the text. These are very good outlines of the important concepts and information covered in the chapters. You are strongly encouraged to review them and use them to guide your studies. In addition, the publishers CD and website has quizzes, vocabulary exercises, and other learning tools that are very useful. If you understand the topics and information contained in BIONet and the textbook's chapter summaries, and are familiar with the terminology used, then you should fare quite well on examinations.

The Counseling and Testing Center (CTC) can provide help and testing for students facing a variety of challenges. Also, there are study groups sponsored by the Tutoring and Academic Assistance Program (TAAP) in the Student Commons.

PASS TO SUCCESS To be successful in this (and most other courses at the UI) you need to:

- Prepare by reading the assigned chapters, exercises, and other material before class.
- Attend class. While there, pay attention to what is being said, ask questions, and think about the material being presented. Use good note taking skills – notes should be notes, not dictation!
- Study regularly. Most individuals will require 1-2 hours of study time for each hour spent in class. Use the resources made available to you by the instructor, in the textbook, and on the textbook publisher's website when studying. Some students will find it useful or necessary to use other resources available in the library or on the Internet.
- Seek help. Meet with the instructor during regularly scheduled office hours or, if necessary, make an appointment. TAPP will open study groups if at least 5 students sign up, so you can discuss the course material, ask questions, and help each other.

DISABILITY SUPPORT SERVICES REASONABLE ACCOMMODATIONS STATEMENT

Reasonable accommodations are available for students who have a documented disability. Please notify your instructor(s) during the first week of class regarding accommodation(s) needed for the course. All accommodations must be approved through Disability Support Services located in the Idaho Commons Building, Room 306. Phone: 208-885-6307 email: dss@uidaho.edu

Biology 115 lecture Schedule Spring 2013

subject to revision

Week of:	Monday	Wednesday	Friday
01/07/13	No class	Intro to course Quiz 1 opens	The big picture Read: Chapter 1 and 'evolution as a tinkerer'
01/14/13	Chemistry of life Read: Chapter 2, 3 Quiz 2 opens	Chemistry of life	Macromolecules Read: Chapters 4, 5 Quiz 3 opens
01/21/13	Martin Luther King Day: no class	Macromolecules	Cell Structure & function Quiz 4 opens Read: Ch. 6
01/28/13	Cell Structure & function	Exam I review	Exam I
02/04/13	Biological membranes Quiz 5 opens Read: Ch. 7	Biological membranes	Energy and enzymes Quiz 6 opens Read: Chapter 8
02/11/13	Energy and enzymes	Cellular Respiration Quiz 7 Read: Chapter 9	Cellular Respiration
02/18/13	President's Day: no class Quiz 8 opens	Photosynthesis Reading: Chapter 10	Photosynthesis
02/25/13	Exam II review	Exam II	Protein Synthesis Quiz 9 opens Read: Chapter 17
03/04/13	Protein Synthesis	DNA Replication Read: chapter 16 Quiz 10 opens	Mitosis Read: chapter 12
03/11/13	Spring Break- No class	No class	No class
03/18/13	Cell Cycles and DNA Replication review	Meiosis Read: chapter 13 Quiz 11 opens	Heredity Read: ch. 14
03/25/13	Heredity Quiz 12 opens	DNA and heredity Read: ch. 15	Exam III review
04/01/13	Cell communication Read: Chapter 11 Quiz 13 opens	Exam III	Gene regulation Read: chapter 18
04/08/13	Gene regulation Quiz 14 opens	Genome evolution Read: chapter 21	Descent with Modification Read: Chapter 22 Quiz 15
04/15/13	Descent with Modification	Evolution of Populations Read: Chapter 23	Evolution of Populations
04/22/13	Exam IV review	Exam IV	Divergence and Diversity Read: Ch. 24 Quiz 16 opens
04/29/13	Divergence and Diversity	Final Exam review	Study day- No class
05/06/13		Final Exam: Wednesday, May 8, 7:30-9:30 am	

Lab Schedule for Biology 115 – Spring 2013

subject to revision

TA's will provide contact information and office hours to their students during the first lab. Students that are unable to meet during regular office hours may schedule an appointment by contacting the instructor or TA's by telephone or email. TA's are the final arbiter of your lab grade.

Section	Time	Teaching Assistant	Section	Time	Teaching Assistant
1	Tue 8:30-11:20	Sam Lyons	7	Wed 5:30-8:20	Jenna McCullough
2	Tue 11:30-2:20	Leila Yazdaninasab	8	Thu 8:30-11:20	Gabrielle Becker
3	Tue 2:30-5:20	Zachary Rogers	9	Thu 11:30-2:20	Leila Yazdaninasab
4	Tue 5:30-8:20	Jordan Day	10	Thu 2:30-5:20	Megan Lopez
5	Wed 11:30-2:20	Brian Faria	11	Thu 5:30-8:20	Kelly Verner
6	Wed 2:30-5:20	Emily Thornquist	12	Mon 5:30-8:20	Josh Gordon

Week of: **Laboratory**

01/07/13	No lab this week
01/14/13	Microscopes and cells
01/21/13	No lab this week- Martin Luther King holiday
01/28/13	Chemical composition
02/04/13	Membranes & Transport
02/11/13	Enzymes
02/18/13	No lab this week- President's Day holiday
02/25/13	Cellular Respiration
03/04/13	Photosynthesis
03/11/13	No lab- Spring Break
03/18/13	Gene Expression - Transformation of <i>E. coli</i>
03/25/13	Cell Division and Mendelian Genetics
04/01/13	Breast Cancer Inheritance & Genetic Counseling
04/08/13	Bioinformatics
04/15/13	Hardy-Weinberg and Kuru
04/22/13	Morphology and evolution
04/29/13	No lab: dead week
05/06/13	No lab: Finals week