

**SYLLABUS****I. General Information**

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Credits: 3 lecture units  
Lecture: MWF 3-3:50, in P167 (DBH167)  
Off. hrs: M,W 9-10:30 (and by appointment)

**II. Course (Catalog) Description:**

**(3 Units)** Introduction to basic biological phenomena common to all living organisms. Cellular and molecular levels of organization, genetics, and the mechanisms of heredity in organic evolution, environmental associations, structure as it relates to function, and reproduction from the molecular to gross structural levels. Satisfies G.E. area B2 (Lecture, 3 hours) (Fall, Spring).

**III. Required Text (New/Used Copies Available) and Other Resources:**

Simon et al. 2012. Essential Biology CSUS Custom Edition, 5<sup>th</sup> ed. Note: if you are repeating this class you are eligible for a complimentary e-version of the text. Details provided in first class. Bring book to class because its many figures/photos/tables will be referred to/used in lecture.

i>Clickers: You will need to purchase/reuse/rent an i>clicker remote. Numerous studies show that i>clickers can improve your retention and learning. You will use the remote to receive in-class participation and performance points. In order to receive this credit, you must register your i>clicker remote online at <http://www1.iclicker.com/register-your-remote/register-clicker/>. Complete the fields: first name, last name, student ID (include preceding zeros), remote ID, image code. Your i>clicker will be used every class day and you are responsible for bringing it. Your responses will contribute towards your total grade (see below). The i>clicker also tracks your attendance and will be used for peer teaching, anonymous polling, provoking discussions, and to gauge your comprehension of difficult topics. Using another student's i>clicker or using multiple i>clickers is a form of academic misconduct (i.e., cheating).

Mastering Biology (MB): You must register for the course at: <http://www.pearsonmylabandmastering.com/northamerica/masteringbiology/>. Complete the first assignment, which teaches you how to use the site. The course ID is: **MBSCHF14**. Be sure to explore the study area. If you encounter problems with this site contact tech support, not me. I will track your access and use of MB, and points earned on the MB website will be included in your final grade (see below). Online homework will be assigned for each text chapter covered. You will have 2-3 class days to complete each assignment.

Scantrons 882E and #2 pencils: Buy 5 scantrons and several pencils to carry you through the semester.

#### IV. Learning Objectives:

1. Provide an overview of the issues, principles, methodologies, and perspectives of biology.
2. Improve understanding for effective communication on biological issues.
3. Provide a working background to critically evaluate biological issues and develop continuous inquiry for life-long learning.
4. Provide the framework to understand, examine critically, and use information from various scientific sources to answer relevant questions in biology.
5. Appreciate the relationships between the fields of biology, chemistry, physics, geology and other sciences with an emphasis on how these fields are closely inter-related.
6. Appreciate the interdependence of humans, natural ecosystems, and the diversity of life on earth.
7. Develop informed and responsible citizens with respect to issues concerning the living world

#### V. Course Requirements:

You are expected to attend regularly and come to class on time for a complete understanding of course materials and to receive updates on exams and assignments. You will take your own notes, prepare your own study guides, and keep track of your grades; do not ask me to do so for you. **Allow at least one week for exams and other assignments to be graded** and returned. In the event you expect to miss an exam, it is your responsibility to contact me ahead of time and provide relevant written information (e.g., letter from a physician) documenting your absence. The final decision to offer makeup exams rests with me. Makeup exams are granted only for compelling and exceptional reasons and must be made up within one lecture day (before or after) the exam date.

**Laptops:** If you use a laptop computer in class it must be used for class-related purposes and you must sit in the 1<sup>st</sup> few rows. A first time violation will result in a 20 point deduction from your grade. A second violation will result in 50 points deducted from your grade.

The rigors of this course **demand regular attendance, commitment, and concentration** to the readings and lectures. As such, it is a high-risk course for many students, especially those who: a) have jobs, b) are pledging Greek organizations, c) have health problems or learning disabilities, d) have demanding family commitments, e) party on weeknights, f) belong to sports teams, g) are taking >16 units during the term. The more of these factors that apply to you, the greater at risk you are. You are encouraged to address those factors that you have control, and do so without delay. Intense effort on your part (i.e., 3 hrs study time for each 1 hr lecture/lab time) may lessen some of these factors.

#### VI. Grading:

There are 600 possible points in this course. Grades will be weighed as follows:

Lecture Exams (3 @ 100 points each)	300 (50%)
Comprehensive Final (1 @ 150 points)	150 (25%)
Mastering Biology	90 (15%)
Clicker Questions	40 (7%)
“ID on Trial” ( <a href="http://www.pbs.org/wgbh/nova/evolution/intelligent-design-trial.html">http://www.pbs.org/wgbh/nova/evolution/intelligent-design-trial.html</a> )	20 (3%)
<b>Total</b>	<b>600</b>

A = 540-600, B = 480-539, C = 420-479, D = 360-419, F < 359 points, CR > 69%, NC < 70%. No +/- grading will be applied to your final grade. It is your responsibility to know your current grade average in the class at any one time.

**Three Friday exams (September 26, October 24, November 21)** will be 50-question mixed format (multiple choice, matching, T/F). The final (4<sup>th</sup>) exam will be on Monday, **December 15** and will be 100 questions. Always bring a #2 pencil and Scantron form **882E** to the exams. Questions for the exams will come mostly from the lecture notes, but others may come from the textbook, MB and video lessons, and websites. You must not leave the room during an exam without my permission. You must turn off cell phones and remove baseball caps during exams. If your cell phone rings during an exam five (5) points will be deducted from your score. Failing to follow instructions written on your exam will result in two (2) points being deducted for **each** violation. Cell phones must be put away during exams. Taking out a cell phone during an exam is considered cheating, your exam will be confiscated, and you will receive a grade of F in the course. On exam days, leave extra early to ensure you will be on time. Traffic and/or car problems are not acceptable excuses for being late. The final exam will be comprehensive of the entire class material. **No extra credit will be offered beyond the points shown above.**

**Note:** the Scantron machine sometime makes mistakes, particularly when you change an answer and do not completely erase the other choice. Challenges to the machine's accuracy must be made by the next class period, after the exam is returned. Changing a Scantron answer after the exam is handed back is cheating and you will receive an F in the course.

**Grading Option:** Until 2 pm, **November 26**, I will sign forms to change grade options. It is your responsibility to turn this form in to Admissions & Records by 5 PM that day (November 26). I will strictly follow the grading option indicated on the final roll sheet supplied by Admissions and Records. **No exceptions will be granted after that date. Consult with your advisor and any source of financial aid before making your decision.** Grades will **not** be changed once they have been submitted.

**Student Conduct:** In such a large and crowded class it is essential that students respect the rights of others. Therefore, those who disrupt the class by talking or any other means will be asked to leave. Repeat offenders will be turned over to the Dean of Students. Turn off your cell phones during class.

**Cheating:** Cheating in any form is inappropriate conduct and will be dealt with swiftly and severely according to Sections 41301 through 41304 of Title 5 of the *California Code of Regulations* which includes expulsion, suspension and probation. Using another student's i>clicker or using multiple i>clickers is cheating.

**Evolution:** "Respect for data, comfort in faith." Someone much wiser than me offered this saying. Evolution is *the* unifying theme of biology and will be discussed openly and referred to frequently. If you have an open mind, which is what college is all about, and you understand the first lecture, you should not be threatened by it, regardless of your religious beliefs. Please remember that *your* beliefs are but one of dozens. Future teachers and those with an interest in the "debate" between science and religion are urged to read *Denying Evolution: Creationism, Scientism, and the Nature of Science*, a very readable paperback by Massimo Pigliucci, available at [Amazon.com](http://Amazon.com).

## **VII. Recording Policy:**

**Audio or video recording of classes (tape and digital format) is not permitted under any circumstances. If you do not intend to comply with this policy, please discuss this with the instructor or take another class.** An exception is made for students registered with Disability Resource Services, who are approved for this accommodation. In such exceptions, DRS students will be asked to sign a "Recording Agreement" which disallows them from sharing recordings with other individuals unless approved by the DRS program.

**VIII. IMPORTANT DATES:**

August 21: Classes begin	November 21: 3 <sup>rd</sup> Exam
September 1: Labor Day, no class	November 26: Last day to change grade option
September 26: 1 <sup>st</sup> Exam	November 26: Homework due ("ID on Trial")
September 18: Last day to drop the course (census date)	November 27-28: Thanksgiving, no class
October 10: Columbus Day, no class	December 8: Review for final
October 24: 2 <sup>nd</sup> Exam	December 10: Reading Day, no class
November 11: Veterans Day, no class	December 15: Final Exam, starts 2 pm

**IX. STUDY SKILLS AND GETTING HELP:**

The following suggestions are offered to help you succeed in this (and your other) classes:

1. **Attend** class!
2. To gain the most from lectures, **read the chapter before class**. Do not be overly concerned if you do not immediately grasp the material. If it were that easy we would not need lectures.
3. Re-read the text and lecture notes after each class.
4. **Complete all assignments** in MB.
5. During class, **take notes** in a way that is intuitive to you, even if you have to use a lot of paper.
6. Pay close particular attention to illustrations, terminology, and descriptions of patterns and functions as these constitute the 'core' material where likely exam questions will come.
7. Do not assume that you will remember everything from one lecture to the next just because it is obvious or makes sense at the time. **Write it down!**
8. **Join a study group** with likeminded individuals. Educational research has shown that students who study in groups tend to do better than those that study alone.
9. **Study** for the exams sooner than the night before or morning of the exam.
10. **Go to bed early** the night before exams and get up early the day of exams.
11. **Learn how you learn** and then stick to that style or process.
12. There is **help on campus** for you if you are struggling with this course:
  - a. The **Biology Club** is a group of students who have gone through general biology courses and they are willing to offer advice and help, especially if you buy them coffee or bring them cookies.
  - b. **Tutoring Services** in the Writing Center on the 1<sup>st</sup> floor of the CSUS Library (L-112) has drop-in tutoring for biology (contact them for days/times).
  - c. The **Advising Resource Center**, Student Support Services and the Program for Academic and Career Excellence (PACE) in the MSR Building have people who can help you.
13. Come to my **office hours**, communicate your specific concerns, and I will respond.

With attention to these pointers, you will notice a higher retention rate and gain greater confidence in the material.

**X. Schedule of Lectures:**

<b>Lecture Topic</b>	<b>Chapter in Text, Homework, or Exam Date</b>
Introduction, syllabus review, <i>i&gt;clicker</i> and <i>masteringbiology</i> registration, course expectations	
Biology today, thinking like a biologist	1
Basic chemistry	2
Water, Compounds	2, 3
Biological molecules	3
Cells, membranes, organelles	4
Energy concepts, ATP, enzymes, transport	5
<b>EXAM 1</b>	<b>September 26</b>
Flow of energy and chemicals, Respiration basics	6
Aerobic respiration, Fermentation, Photosynthesis I	6, 7
Photosynthesis 2: light and dark reactions	7
Mitosis (asexual reproduction), meiosis (sexual reproduction)	8
Patterns of inheritance	9
DNA structure and function, mutations	10
DNA technology, profiling, forensics, genomics, gene therapy	12
<b>EXAM 2</b>	<b>October 24</b>
Evolution	13
Mechanisms of evolution, species concept	13, 14
Evolution of new traits, extinctions, classification	14, 15
Origins of early life, prokaryotes, protists	15
Colonizing land, plant diversity	15, 16
Animal diversity, vertebrates, and human evolution	17
<b>EXAM 3</b>	<b>November 21</b>
PBS-NOVA: "ID on Trial" video (homework due, start of class)	<b>November 26</b>
Diverse environments, biomes, global climate change	18
Populations, growth models, human populations	19
Biodiversity, communities, ecosystems, conservation	20
Review for Final	<b>December 8</b>
<b>FINAL EXAM (Comprehensive)</b>	<b>December 15</b>

The above schedule and procedures in this course are subject to change in the event of extenuating circumstances.