Instructor: Joe Saldivar; Ph. D.
Office: SE-49B
Office Phone: (661) 395-4099
e-mail: jsaldiva@bakersfieldcollege.edu

CRN #74583
Lec. MW 1:00 – 2:25 PM SE-51
Lab M 2:35 – 5:45 PM SE-30

Office Hours
TR 8:30 AM - 9:30 AM

Note: If these office hours conflict with your class or work schedule, contact me to make other arrangements. The instructor will not answer any questions on the same day of the exam or the due date of the assignment.

Text Materials:
Previous editions are fine. I also have several copies of the text in the BC Library on reserve.

ISBN; 978-1-4000-5217-2

Biology 11 Lab Manual ©
• This can be purchased in the BC Bookstore.

I also recommend colored pens or pencils if you are a visual learner.

Attendance
“Regular class attendance is expected of all students enrolled in the college. It is especially important that students attend the first session of each class for it is at this time that instructors may distribute syllabi and course requirements, and explain what is expected in terms of attendance.” You cannot make-up a lab if you are absent. Showing up for the lab quiz and leaving early is considered an absence. There is a direct correlation between attendance and your grade in the class.
Student Conduct
- Cheating or plagiarism in any form is not tolerated and will result in a zero on the assignment, quiz or exam. Please see the BC Catalog for definitions. The work you submit must be original: your work and your words. You may discuss lab work and collaborate on data but the final writing must be independent and originally yours. Common wording is considered plagiarism. You must cite any authors whose information or artwork you use, copy, paste or quote.
  - First offense: Zero on the assignment, quiz or exam.
  - Second offense: Report to Dean of Students.
- Turn off all cellular phones. You will be penalized 3-points when your cell phone rings during class! (Please contact me if you are expecting an important call.)
- Video and Audio recording of classes are allowed for educational purposes. Sharing recordings on the internet/email is not permitted. ©
- No Ipods, cell phones or computers may be used during quizzes or exams.

Grades
Lab Quizzes (11 @ 10 points each)
A weekly quiz will be given promptly at the beginning of the lab. It will cover the previous lab material as well as the day’s lab. Lab quizzes cannot be made-up.

Lecture Quizzes (10 @ 10 points each)
A weekly quiz will be given promptly at the beginning of Wednesday’s lecture. It will cover material that may be seen on the upcoming exam. There are no make-up quizzes.

Exams (3 @ 225 points each and 1 cumulative final @ 250 points)
There will be 3 exams worth 225 points each and one cumulative 250-point final exam. One hundred points come from the Course SLOs (Student Learning Objectives in the syllabus) and one hundred points will be from the final lecture material. The final exam is optional (See final exam policy). Make sure you bring the appropriate ‘Blue Book’ on the day of each exam!

Exam #1 Wednesday September 21st
Exam #2 Wednesday October 19th
Exam #3 Wednesday November 16th
Final Exam Wednesday December 7th (Noon – 1:50 PM)

Lab Reports (13 @ 10 points each)
There will be lab write-ups for each lab. You will be penalized 5 points if your lab report is not stapled. Place the lab reports in the “GREY-TUB”. The lab reports are due at the beginning of the next lab period. I will NOT accept late lab reports without a “No Questions Asked”. It is due by the following lab period.

Lab Exam (160 points)
There will be a cumulative lab exam during the last week of instruction. It’s an open lab-report exam. You will not need a ‘Blue Book’ for this exam. I will provide the answer sheet.
Projects (4 @ 25 points each.)
Choose 4 projects from the following list.

<table>
<thead>
<tr>
<th>Project</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Queen Lab Write-up</td>
<td>1 week after lab</td>
</tr>
<tr>
<td>Cell Brochure</td>
<td>1 week after lab</td>
</tr>
<tr>
<td>Metabolism Write-up</td>
<td>1 week after lab</td>
</tr>
<tr>
<td>Punnett Project</td>
<td>1 week after lab</td>
</tr>
<tr>
<td>Product Comparison Report</td>
<td>September 21</td>
</tr>
<tr>
<td>San Simeon Kayak Trip $30 (Saturday, Sept. 17)</td>
<td>September 21</td>
</tr>
<tr>
<td>CALM (On your own)</td>
<td>October 5</td>
</tr>
<tr>
<td>Internet Project</td>
<td>October 26</td>
</tr>
<tr>
<td>Oral Report</td>
<td>October 26</td>
</tr>
<tr>
<td>Feline Breeding Compound (On your own)</td>
<td>October 26</td>
</tr>
<tr>
<td>LA Zoo (On your own)</td>
<td>October 26</td>
</tr>
<tr>
<td>Library Workshop</td>
<td>November 16</td>
</tr>
<tr>
<td>Blood Donation Project</td>
<td>November 16</td>
</tr>
<tr>
<td>Long Beach Aquarium $10 (Saturday Nov. 19)</td>
<td>November 23</td>
</tr>
<tr>
<td>Santa Barbara Whales (On your own)</td>
<td>November 23</td>
</tr>
</tbody>
</table>

Don’t Procrastinate!
You can do as many projects as you wish, but I only take the top 4 scores. You also can do turn in any project early if you wish. You must provide proof if you complete project on your own in order to get credit: Example…CALM, Blood Donation, LB Aquarium, Feline Breeding Compound, SD Wild and LA Zoo. You cannot turn in any project after the due date! Not even with a coupon.

HeLa Quizzes (11 @ 20 points each)
We will have a weekly quiz on each chapter of the book. The quiz will be given orally during at the beginning each Monday lecture. There are no make-up quizzes!
Here is Quiz Schedule:
Quiz 1; Prologue-Ch. 2 (pg. 1-26)
Quiz 2; Ch. 3 – Ch. 7 (pg. 27-62)
Quiz 3; Ch. 8 – Ch. 11 (pg. 63-86)
Quiz 4; Ch. 12 – Ch. 15 (pg. 89-117)
Quiz 5; Ch. 16 – Ch. 19 (pg. 118-151)
Quiz 6; Ch. 20 – Ch. 22 (pg. 152-176)
Quiz 7; Ch. 23 – Ch. 25 (pg. 179-206)
Quiz 8; Ch. 26 – Ch. 29 (pg. 207-240)
Quiz 9; Ch. 30 – Ch. 32 (pg. 241-267)
Quiz 10; Ch. 33 – Ch. 35 (pg. 268-293)
Quiz 11; Ch. 36 – Ch. 38 (pg. 294-310)

Syllabus Quiz (25 points)
You will be given a take-home quiz regarding the Bio-11 web site. The quiz is due Wednesday August 24, 2011.
Grade Check (2 @ 15 points each)
You will check your grade on-line and submit your % and ‘Grade’ you have during the course of
the semester.

Therefore:

<table>
<thead>
<tr>
<th>Total pts. with Final Exam</th>
<th>Total pts w/o Final Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Quizzes 110 pts.</td>
<td>Lab Quizzes 110 pts.</td>
</tr>
<tr>
<td>Lecture Quizzes 100 pts.</td>
<td>Lecture Quizzes 100 pts.</td>
</tr>
<tr>
<td>Exams 675 pts.</td>
<td>Exams 675 pts.</td>
</tr>
<tr>
<td>Final Exam 250 pts.</td>
<td>Final Exam 250 pts.</td>
</tr>
<tr>
<td>Lab Reports 130 pts.</td>
<td>Lab Reports 130 pts.</td>
</tr>
<tr>
<td>Lab Exam 160 pts.</td>
<td>Lab Exam 160 pts.</td>
</tr>
<tr>
<td>Projects 100 pts.</td>
<td>Projects 100 pts.</td>
</tr>
<tr>
<td>HeLa quizzes 220 pts.</td>
<td>HeLa Quizzes 220 pts.</td>
</tr>
<tr>
<td>Grade check 30 pts.</td>
<td>Grade check 30 pts.</td>
</tr>
<tr>
<td>Total 1800 pts</td>
<td>Total 1550 pts</td>
</tr>
</tbody>
</table>

Grading Breakdown
Including the Final Exam Not including the Final Exam
Above 1620 A Above 1395 A
1440-1619 B 1240 – 1394 B
1260-1439 C 1085 – 1239 C
1080-1259 D 930 – 1084 D
Below 1079 F Below 929 F

Late and Make-up Policy
- You can always turn anything in early!!!
- I do NOT accept any late projects.
- You may use a “No Questions Asked Coupon” to turn in only late lab reports.
- Coupon must be redeemed by the next lab period.
- Unused coupons are worth 1 bonus point each at the end of the semester. Three coupons earn an extra 2 bonus points (5 bonus points possible).
- Quizzes, labs and exams cannot be made up.
- If you know you will be absent for an exam, PLEASE contact me so we can make other arrangements.

Final Exam Policy
- If you are content with your grade leading into the Final Exam, you may take that grade as your FINAL GRADE.
- It is possible to improve or hurt your grade by taking the Final Exam.

Syllabus Statement
Students with disabilities who believe they may need accommodations in this class are encouraged to contact Supportive Services (FACE-16), 395-4334, as soon as possible to better ensure such accommodations are implemented in a timely fashion. It is your responsibility to make these arrangements well in advance of any exam or assignment.

Final words
- An “A” doesn’t equal hard work. An “A” = Mastery of the Subject
Bio-11 Laboratory Safety Rules

- No smoking in the classroom, hallways or labs. Smoke only in designated areas, outside.

- Memorize the location of the emergency eyewash station, emergency shower, fire blanket and fire extinguisher. In the event of a fire smother it with a blanket. If it involves your clothing or hair, never run! Stop, drop and roll.

- In the case of a fire, explosion, earthquake or disaster there are procedures posted on the bulletin board. Evacuate the classroom immediately and check in with the instructor. Do not leave the area until you have informed the instructor.

- Work in the lab only when supervised.

- Be prepared for each upcoming lab, perform only authorized experiments and be aware of the safety measures required for each lab.

- Keep the area clear for the experiment, wear appropriate clothing, lab coats, goggles and tie hair back if necessary.

- Report any accident immediately to the instructor regardless of how minor it may appear. Be cautious if there is any bleeding or if a chemical is spilled or glass is broken.

- A broken thermometer is considered a Hazardous Materials spill. Do not attempt to clean it or any other possible hazard up. Notify the instructor immediately.

- Become familiar with the MSDS (Material Safety Data Sheet) file, its location, purpose and use.

- Check all labels of chemicals for contents and concentration before use. Use gloves when appropriate. Never return a chemical to the original bottle contaminating the stock supply.

- Should a chemical spill on your skin or in your eyes, flush immediately with water and have someone notify the instructor.

- Clean up your area and return all supplies to the appropriate locations after every lab. You and your lab partners will lose 5 points if you do not clean your lab area.
### Schedule for Fall 2011

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture</th>
<th>Lab</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 22-26</td>
<td>Syllabus; Introduction (Ch 1)</td>
<td>Jelly-Side Down (Scientific Method)</td>
<td></td>
</tr>
<tr>
<td>Aug-Sept 29-2</td>
<td>Ecology and Populations (Ch 18)</td>
<td>Red Queen Lab (Predator/Prey &amp; Adaptations)</td>
<td></td>
</tr>
<tr>
<td>Sept 5-9</td>
<td>Ecosystems (Ch 19) Evolution (Ch 13)</td>
<td>No lab This Week</td>
<td>Labor Day (9/5)</td>
</tr>
<tr>
<td>Sept 12-16</td>
<td>Human Impact (Ch 20) Chemistry (Ch 2)</td>
<td>Betta Lab (Animal Behavior &amp; Evolution)</td>
<td>Kayak Trip (9/17)</td>
</tr>
<tr>
<td>Sept 19-23</td>
<td>Biol. Molecules (Ch 3)</td>
<td>The Microscope &amp; Cells</td>
<td>Exam #1 (9/21)</td>
</tr>
<tr>
<td>Sept 26-30</td>
<td>Cells (Ch 4 and 5)</td>
<td>Diffusion and Osmosis</td>
<td></td>
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<tr>
<td>Oct 3-7</td>
<td>Plants (Ch 28 and 29)</td>
<td>Exergonic/Endergonic Rxns &amp; Fishing for Cell Resp.</td>
<td></td>
</tr>
<tr>
<td>Oct 10-14</td>
<td>Photosynthesis (Ch 7)</td>
<td>Mitosis/Mitosis</td>
<td></td>
</tr>
<tr>
<td>Oct 17-21</td>
<td>Cell Resp. (Ch 6)</td>
<td>Marriage Lab</td>
<td>Exam #2 (10/19)</td>
</tr>
<tr>
<td>Oct 24-28</td>
<td>Mitosis/Mitosis (Ch 8)</td>
<td>DNA Lab</td>
<td></td>
</tr>
<tr>
<td>Oct-Nov 31-4</td>
<td>Genetics (Ch 9)</td>
<td>Owl Pellet</td>
<td></td>
</tr>
<tr>
<td>Nov 7-11</td>
<td>DNA (Ch 10)</td>
<td>Epidemiology</td>
<td></td>
</tr>
<tr>
<td>Nov 14-18</td>
<td>Biotech (Ch 12)</td>
<td>Seeing, Bleeding, Breathing</td>
<td>Exam #3 (11/16)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LB Aquarium (11/19; 11:00 AM)</td>
</tr>
<tr>
<td>Nov 21-25</td>
<td>A &amp; P (Ch 21-27)</td>
<td>Lab Review</td>
<td></td>
</tr>
<tr>
<td>Nov-Dec 28-2</td>
<td>A &amp; P Continued (Ch 21-27)</td>
<td>Lab Final</td>
<td></td>
</tr>
<tr>
<td>Dec 5-9</td>
<td></td>
<td></td>
<td>Final Exam (12/7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(12:00 – 1:50 PM)</td>
</tr>
</tbody>
</table>
Bakersfield College Biology-11 Course Student Learning Outcomes
(Revised February 26, 2004)

Students that successfully complete the course will be able to do the following:

1. Scientific method
   The students will be able to:
   -- research a topic, design experiments, synthesize and evaluate the information, justify and express their opinions.

2. Microscope
   The students will be able to:
   -- properly use the microscope as a tool to study microscopic organisms and cellular structures.
   -- gain a perspective of the invisible biological world by using the microscope.
   -- differentiate between the microscope and microscopic objects, discover, locate and compare and contrast size of microscopic organisms.

3. Group work
   The students will be able to:
   -- conduct a lab assignment, dividing tasks, valuing input and collaboration, and producing a final report.

4. Study skills
   The students will be able to:
   -- effectively study, analyze, and evaluate biological information, to assemble and articulate scientific data.

5. Critical thinking
   The students will be able to:
   -- analyze abstract information and present related data appropriately so as to arrive at a conclusion based on evidence including, but not limited to graphs computer skills, numerical data, text, lecture, and information from outside sources.

6. Cell theory
   The students will be able to:
   -- identify various cells and their structural components.
   -- differentiate the functions of each of their components.

7. DNA and heredity
   The students will be able to:
   -- understand the significance of DNA as the basis for heredity, structure, function and disease in living organisms.
   -- describe the DNA molecule and explain how it is used in living systems to create proteins.
   -- describe how proteins function in living cells.

8. Basic human anatomy and physiology
   The students will be able to:
   -- describe the organs found in human organ systems, then explain the role played by each organ in the overall functioning of that system.

9. Diversity of organisms
   The students will be able to:
   -- compare/contrast characteristics of various organisms particularly related to energy sources (feeding style), cellular composition, reproduction and relationship to the ecosystem.

10. Ecology and the environment
    The students will be able to:
    -- describe the flow of energy through the ecosystem, then construct a food web, placing specific species of organisms at each level.
    -- choose a common ecosystem disturbance of human origin and predict the effects of that disturbance on a food web.
    -- understand the complexity of ecosystems and environmental issues.

11. Real world/Current event applications
    The students will be able to:
    -- recognize, value, and apply major biological concepts contributing to current issues in the biological realm.
    -- apply critical thinking skills to formulate and defend a position on a controversial issue of biological importance.
Assessment Rubric for Essays

*(How are essays graded?)*

This is the scoring rubric that I use when I grade your answers to lab report and essay exam questions. Assume the answer is worth 5 points:

<table>
<thead>
<tr>
<th>Point Value</th>
<th>Quality of Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>You have submitted a full and complete description or explanation. I have no more “how” or “why” questions and all of the appropriate vocabulary has been included.</td>
</tr>
<tr>
<td>4</td>
<td>Your explanation is fairly complete; however I may still be able to ask you “how” or “why” at least once. Appropriate vocabulary has been incorporated in your answer.</td>
</tr>
<tr>
<td>3</td>
<td>Your explanation is partially complete or correct; however I may still be able to ask you “how” or “why” more than once. Not enough appropriate vocabulary has been incorporated in your answer.</td>
</tr>
<tr>
<td>2</td>
<td>Your answer is underdeveloped in terms of explanations and use of appropriate vocabulary</td>
</tr>
<tr>
<td>1</td>
<td>Your written work does not address the question that has been asked.</td>
</tr>
<tr>
<td>0</td>
<td>Not even in the “ballpark” with your answer or you didn’t even attempt an answer.</td>
</tr>
</tbody>
</table>