Biology 20
Introduction to Biology

Class Hours:
Lecture 20440/20445 7:30 - 10:30AM Tuesday BGS ANNEX
Lab 20440 7:30 - 10:30AM Thursday SM 246 Z. Johnson
Lab 20445 7:30 - 10:30AM Thursday SM 202 J. Anderson

Office Hours and Location
Monday through Thursday: By appointment
Web Site: http:\iserver@saddleback.cc.ca.us/div/hort
E-mail: zjohnson@saddleback.cc.ca.us
Phone: 582-4913

Student Electronic Devices:
Place all electronic communication tools on "Silent" mode, specifically cell phones, beepers, and laptop computers.


Texts:

Laboratory Manual: lab exercises located at the following address - 
http://www.saddleback.edu/faculty/steh/bio20labfolder/bio20labindex.html

Reference Material: Check library computer catalog for call number.

Metabolism
http://expasy.hcuge.ch (University of Geneva shows metabolic pathways)
http://www.biology.arizona.edu/biochemistry/problem_sets/photosynthesis_1/photosynthesis_1.html (Test Questions)

Cell Structure
Electron Microscopy
http://www.uaf.edu/CMRR/ctcm/em.htm
Bio 20
Introduction to Biology

Nanoworld
http://www.uq.oz.au/nanoworld/images_1.html

Genetics
Mendal
http://www.biology.arizona.edu/mendelian_genetics/mendelian_genetics.html

Evolution


Savage, Jay M. Evolution 1963. Published by Holt, Rinehart and Winston, New York, N.Y.


Darwin's Books
http://www.literature.org/Works/Charles-Darwin

Ecology

Population Growth
http://www.geom.umn.edu/education/calc-init/population
http://www.prb.org/prb
http://viner.eata.vt.edu/~sharov/PepEcol/loc6/lifetab.html

General Reading
Internet Science Magazine
http://www.apnet.com/inscight

Bio 20
Introduction to Biology

Dates to Remember:
Labor Day - Classes not in session Sept. 2
Veterans Day - Classes not in session Nov. 11
Thanksgiving Observance - Classes not in session Nov. 28 – Dec. 1

Final Examine for Bio 20 classes Fall Semester: December 17, 2002 (7:30am - 9:30am)
A total of 20 points for a field-oriented class and additional extra credit points for other projects and assignments are possible in this class. You should keep in mind that extra credit points will not change a grade more than one full grade. For example, a grade change from C to B, but not C to A. Also, you must earn a D or better in the laboratory and/or lecture, otherwise, extra credit points will not change your grade. EXTRA CREDIT WILL NOT BE ACCEPTED AFTER NOVEMBER.

Code of Conduct

A student may be disciplined for one or more of the following causes related to college activity or attendance.
1. Continued disruptive behavior continued willful disobedience, profanity or vulgarity, or the open and persistent defiance of the authority of, or persistent abuse or district or college personnel.
2. Assault, battery, or any threat of force or violence to a student, district or college personnel.
3. Willful misconduct resulting in injury or death to a student or college or district personnel or willful misconduct resulting in cutting, defacing, theft, or other injury to any real or personal property owned by the district, college personnel, or students in attendance at the college.
4. Willfully or persistent smoking in an area where smoking has been prohibited.
5. Cheating or plagiarizing in relation to a district or college course.
6. Disorderly, lewd, indecent, or obscene conduct on district-owned or controlled property.
7. The obstruction or disruption of the educational process.
8. Any other cause not previously listed which is identified as good cause.
9. All of the Student Code of Conduct have not been listed, so if you wish to learn more about the college's policies please refer to the student handbook.

Removal from class by Instructor

An instructor may remove a student from class for the day of the removal and the next class meeting for any of the causes set forth in the Code of Conduct, Article II. During the period of the removal, the student shall not be returned to the class from which he or she was removed without the concurrence of the instructor (Calif. Ed. Code, Section 76032).

Classroom Etiquette and Study Skills

1. Be prompt for class
2. Develop good listening skills
3. Leave your cellular phones or pagers in your car.
4. Complete homework before class.
5. Come to class prepared for the work to be done.
6. Familiarize yourself with the Saddleback College Student Code of Conduct.
7. Familiarize yourself with the Saddleback College Attendance Policy. (6 hrs)
Forgive me if I forget your name (8wks).

**Bio 20**  
**Introduction to Biology**

### INTRODUCTION TO BIOLOGY LECTURE

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Chapter</th>
</tr>
</thead>
</table>
| 1    | Introduction and logistics  
Biology as a science  | 1       |
| 2    | Scientific method, the atoms of life                         | 2-3     |
| 3    | The foundation of life.                                      | 3       |
| 4    | The cell of life                                            | 4       |
| 5    | How cells interaction with the environment                  | 4       |
| 6    | How cells reproduce                                         | 6       |
| 7    | How populations evolve                                      | 10      |
| 8    | The five kingdoms of life                                   | 12      |
| 9    | Single to multicellular life forms                           | 13      |
| 10   | Plants and animals                                          | 14      |
| 11   | Energy and life/Photosynthesis                              | 5       |
| 12   | Photosynthesis/Respiration                                  | 4       |
| 13   | Mendelian genetics                                          | 7       |
| 14   | Mendelian genetics                                          | 7       |
| 15   | DNA & Protein Synthesis                                     | 8       |
| 16   | Ecosystems                                                  | 28 & 29 |
| 17   | Final Examination                                           | 7:30 am |
Bio 20
Introduction to Biology

Grading:

The Lecture Grade is based on quizzes (1-10 points) and four examines, each exam is 50 points. All examines are scan-tron, using an 882 form. Questions are from the textbook and lecture notes.

The Laboratory Grade is based on attendance, laboratory assignments (up to 10 points each) and one or two (up to 50 points) tests. The time to complete the laboratory task varies for each student. To accommodate the needs of each student, each laboratory is assigned a one or two-week period. At the end of the period, all tasks should have been completed.

Tips regarding grading labs

1. Print your name on the top, first page of each assignment; Assignments without names will receive a zero.
2. Complete all tasks (fill-ins, drawings, definitions, charts, calculations, etc.)
3. Art is not a prerequisite for this course, but neatness is expected.
4. Staple all required paper work together. Unstapled assignments will not be graded.
5. Turn assignments in on time, typically at the beginning of the laboratory period. Late assignments will be accepted up to one-week after the due date, but not after that date. Two points will be subtracted from the total score for all late assignments.

Review Sheets and Tests

A review sheet will be available to all students approximately one week before each test. The sheet will provide general information about the terms, concepts, and content of the test. A portion of a lecture preceding the test day will be available for students to ask questions about the review sheet material.

Attendance and Lateness

Please contact me if you know you will be late or absent on a specific date either in person or by telephone (582-4913), or as soon as possible, which includes the day you are absent. Students who are late please enter the room after the break (usually after 9:00 am). If you are late or absent for three times during the semester, you may be dropped from the course.
<table>
<thead>
<tr>
<th>WEEK</th>
<th>START</th>
<th>TOPICS</th>
<th>READINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/29</td>
<td>Lab schedule, safety, hypothesis testing</td>
<td>Notes</td>
</tr>
<tr>
<td>2</td>
<td>9/5</td>
<td>Metric system, measurements and graphs</td>
<td>Notes</td>
</tr>
<tr>
<td>3</td>
<td>9/12</td>
<td>Macromolecules – indicator tests and food testing</td>
<td>Notes</td>
</tr>
<tr>
<td>4</td>
<td>9/19</td>
<td>Microscope &amp; cells Students should read the material covered in appendices A and B at the end of the lab manual</td>
<td>Notes</td>
</tr>
<tr>
<td>5</td>
<td>9/26</td>
<td>Physical Transport – Browning movement, diffusion, and Osmosis</td>
<td>Notes</td>
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<tr>
<td>6</td>
<td>10/3</td>
<td>Enzymes &amp; Cellular Respiration</td>
<td>Notes</td>
</tr>
<tr>
<td>(Sat)</td>
<td>10/5</td>
<td>San Diego Wild Animal Park (1:30 pm)</td>
<td>Notes</td>
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<tr>
<td>7</td>
<td>10/10</td>
<td>Photosynthesis</td>
<td>Notes</td>
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<tr>
<td>8</td>
<td>10/17</td>
<td>Cell division Students will observe under the microscope cells in the process of cell division, either mitosis or meiosis.</td>
<td>Notes</td>
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<tr>
<td>9</td>
<td>10/24</td>
<td>Plant reproduction &amp; pollination ecology</td>
<td>Notes</td>
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<tr>
<td>10</td>
<td>10/31</td>
<td>Plant structure, fruit and nuts Students will examine plant tissue and fruit bodies.</td>
<td>Notes</td>
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<tr>
<td>11</td>
<td>11/7</td>
<td>Invertebrate phyla Students will examine small animals under the microscope and identify some of the major differences between phyla.</td>
<td>Notes</td>
</tr>
<tr>
<td>12</td>
<td>11/14</td>
<td>Field trip</td>
<td>Notes</td>
</tr>
<tr>
<td>13</td>
<td>11/21</td>
<td>Animal diversity Students will examine animals and identify common names of birds, fish, and mammals found in California and adjacent areas.</td>
<td>Notes</td>
</tr>
<tr>
<td>14</td>
<td>11/28</td>
<td>THANKSGIVING BREAK NO LABS</td>
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</tr>
<tr>
<td>15</td>
<td>12/5</td>
<td>Lab Test/Summary</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>12/12</td>
<td>CLASS NOT IN SESSION</td>
<td></td>
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</tbody>
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