Course: Biol 188-101 When and where: Thurs 8:40 – 12:00, Sci 145

Instructor: Dr. Jocelyn Elson-Riggins, Office – Room 118 Science Building, Phone: 657-1645
Office Hours: M 9:30-11:30; W 9:30-10:30 or by appointment
Email: jelsonriggins@msubillings.edu When using email, please identify yourself in the subject heading with Biol 188 and a brief description of the e-mail.


Course description - Welcome to General Biology lab. Topics in this course are designed to compliment lectures presented in Biol 178. You will be given a broad survey of experiments selected to optimize your time and understanding of basic laboratory techniques and biological principles.

Expected Outcomes - The labs are designed to accomplish two major goals: (1) To familiarize you with basic laboratory skills, (2) to reinforce important biological concepts with first hand experience, critical thinking and cooperative investigation.

Assessment - An important outcome of this course will be your ability to apply the principles of biology discussed in lecture with problem solving in biology. We will assess your ability to do this through conventional quizzes and a final lab exam. A quiz will be given each week at the beginning of lab. It is your responsibility to be on time, since there will not be an opportunity to make up a quiz. Each quiz will cover material in the preceding lab.

Grading - 80% Quizzes - Best 8 of 10 quizzes (A missed quiz counts as a low score)
20% Final Comprehensive Exam - covers all labs

Your final grade will be determined by your total percentage for the entire course.
90-100% = A 80-89% = B 70-79% = C 60-69% = D Below 60% = F

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<thead>
<tr>
<th>Lab</th>
<th>Title</th>
<th>Date</th>
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<tbody>
<tr>
<td>1.00</td>
<td>Measurements in Biology: The Metric System and Data Analysis</td>
<td>Sep 15</td>
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<tr>
<td>2.00</td>
<td>Microscope: Basic Skills of Light Microscopy</td>
<td>Sep 22</td>
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<tr>
<td>3.00</td>
<td>The Cell: Structure and Function</td>
<td>Sep 29</td>
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<td>4.00</td>
<td>Cell Membranes and Spectrophotometry</td>
<td>Oct 6</td>
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<td>5.00</td>
<td>Respiration: Aerobic and Anaerobic Oxidation of Organic Molecules</td>
<td>Oct 13</td>
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<td>6.00</td>
<td>Photosynthesis: Pigment Separation, Starch Production, &amp; CO2 Uptake</td>
<td>Oct 20</td>
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<td>7.00</td>
<td>Mitosis</td>
<td>Oct 27</td>
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<td>8.00</td>
<td>Meiosis</td>
<td>Nov 3</td>
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<td>9.00</td>
<td>Genetics: The Principles of Mendel</td>
<td>Nov 10</td>
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<td>10.00</td>
<td>Molecular Genetics</td>
<td>Nov 17</td>
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<td>11.00</td>
<td>Ecology: Population Growth</td>
<td>Dec 1</td>
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<tr>
<td>12.00</td>
<td>Final Comprehensive Exam</td>
<td>Dec 8</td>
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Hints for success in lab
1. Be there - It is virtually impossible to make up a lab.
2. Read each exercise in advance of the lab period.
3. Do it yourself - Don't be a spectator. Learning is best accomplished by trying and attempting a lab exercise yourself, and discussion with your lab partners. Need help? Ask questions! We're here to help.
4. Answer all questions - All exercises contain review questions. Answer them.
SAFETY RULES and LAB HYGIENE

A copy is posted on the bulletin board in front of lab.

Please read this, sign it and return in class today. Thanks.

Each student is responsible for cleaning up the materials used during lab and returning the equipment and materials to their original places. In this way, all students will be able to begin with clean materials and equipment in good order. Some chemicals are hazardous. Although these will be identified as such, you are encouraged to develop good lab technique by treating all materials as potentially hazardous.

1. Food or drink is prohibited in the lab at all times. No exceptions.
2. In case of fire or accident, take emergency action and notify the instructor at once.
3. You must go to the infirmary for treatment of cuts, burns, or inhalation of fumes. Your instructor will arrange for transportation if needed.
4. Unless instructed to do so, never taste anything in the laboratory. This applies to all food as well as chemicals.
5. Exercise great care in noting the odor of fumes and avoid breathing fumes.
6. Never use mouth suction in filling pipettes with chemical reagents. Use a suction bulb or pipette pump.
7. Don't force rubber stoppers into glass tubing. Protect your hands with a towel when inserting tubing into stoppers; lubricate hole and tube well with water, glycerol, or some other slippery substance.
8. Confine long hair when in the laboratory (use rubber bands if necessary).
9. Perform no unauthorized experiments.
10. Never work in the laboratory alone.
11. Do not smoke in the laboratory or building at any time.
12. Chemicals and solutions are not to leave the science building without your instructor's consent. If any solution, reagent, etc., is needed, see your instructor.
13. Before lighting a flame or turning on a hot plate, see that volatile, flammable liquids are not in the vicinity. Before pouring volatile liquids, be certain that none of your neighbors are using a flame. Never leave a burner unattended.
14. No one may be in a laboratory earlier than 8 a.m. or later than 5:40 p.m. Monday through Friday unless an instructor has issued written permission. Labs are not open on Saturdays, Sundays, or during holiday periods.
15. Material Data Safety Sheets for any chemical used in this laboratory can be obtained from Science Technical Services in Sci 241. These sheets contain information on the hazards associated with the chemical as well as information on its proper handling and storage.
16. Use of a cell phone in lab is not permitted. As a courtesy to your classmates, please turn off your cell phone before entering the lab.

I have read the above rules and will observe them at all times.

Your name ______________________________ Date ________________