MONTGOMERY COLLEGE  
Biology Department  
Rockville Campus  
BIOL 150 Principles of Biology 1  
Spring 2019

I. Instructor Information  
Name: Shawn Lester  
Office: SC 234H  
Phone: 240-567-5127  
Email: shawn.lester@montgomerycollege.edu  
Web Site: www.montgomerycollege.edu/~slester  
Office Hours: MW: ~3-4pm; T: 1-2pm, ~3:30-4pm; R: 1:30-2pm--Email is also an excellent way to ask questions. I check my email 7 days/week.

II. General Course Information  
BIOL 150, Principles of Biology 1 is a four credit lab/lecture course intended for science majors. Prerequisite/Corequisite: College-level chemistry is recommended.  
Course Description: This course covers the molecular and cellular basis of life, enzymes, photosynthesis, cell respiration, genetics, reproduction, and development. Format: This course is primarily lecture in delivery with hands-on lab activities. There will be case studies / cooperative learning activities performed in lecture and lab. Attendance is required to perform these activities.  
Review Sessions: There will be review sessions for both lecture and lab material. These sessions are taught by other instructors. Check my web site for schedules. These sessions are subject to change.

III. Course Outcomes  
• Upon course completion, a student will be able to:  
  • Analyze and interpret experimental results to reinforce biological principles  
  • Apply basic mechanisms of heredity to predict inheritance of traits  
  • Describe the basic principles of chemistry that are important to biology and identify the structure and functions of macromolecules important to living things  
  • Describe the basic processes of cellular metabolism including cell respiration and photosynthesis  
  • Describe the processes of reproduction and development  
  • Explain the cellular and molecular basis of inheritance

This list is not intended to be comprehensive. Specific learning objectives will be included with each lecture.

IV. Texts and Supplies  
Text: Principles of Biology 1, 4th edition (custom for MC) or Campbell & Reece Biology 6th ed (or higher, used and cheap!) or OpenStax (free downloadable pdf)  
Lab: Montgomery College Lab Manual for Biology 150  
Must Have: regular pencils; shoes that cover your entire foot; goggles and rubber gloves are recommended

V. Grading  
A. Requirements/Hints for Success  
Lecture  
In order to successfully complete this course the student must attend the lectures and take all of the lecture exams (see section B). There is a significant amount of written work that must be submitted complete and on time. The PowerPoints will be available on my web site. The textbook is primarily a supplement to the lecture. Anything specifically referenced (verbally or in writing by me) in the book is “fair game” on an exam. The lecture exam format can be multiple-choice, short answer, essay or any combination thereof.

Lab  
The student must attend all laboratories and take the lab exams. More than two unexcused lab absences will result in an “F” for the course. Being on time to lab counts. If you are late twice to lab, it will count as an unexcused absence. Lab notebooks will not be collected. You will be tested on knowledge based on the results and observations you obtain. The lab exams will be both written and practical in nature. This means that exhibits (slides, cultures, test results, etc.) will be set up at stations around the lab. This exam has a time limit of 1.5 hours; not the entire lab period. This is to allow students with disabilities extra time accommodations as determined by the college and federal law!

B. Course Grade  
The lecture and lab components are combined to make one final grade. The following grading policy is tentative and subject to change. For the purposes of posting grades, you will create a 4-digit PIN number. Do not use 1234, 0000 etc.

Lecture  
4 hour exams @ 120 points each  
(You may drop the lowest exam grade and replace it with the final. Optional Cumulative Final @120 points)  
Activity (TBA-there may be a different assignment or additional assignments)  
Total = 500 points
The final exam for lecture is comprehensive and optional. It may be used to replace the lowest lecture exam score. The final lecture exam is typically all multiple-choice. Please show up at the beginning of the scheduled time. There will also be a comprehensive optional lab exam which can be used to replace the lowest lab exam score. Both of these exams are optional and cannot hurt your final grade.

<table>
<thead>
<tr>
<th>Lab</th>
<th>Practical Exam I</th>
<th>130 points</th>
<th>Pre&amp;Post-Lab Questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Practical Exam II</td>
<td>130 points</td>
<td>Graphing – 1C 30 points</td>
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<tr>
<td></td>
<td>Lab Report: Osmosis</td>
<td>50 points</td>
<td>Osmosis – 3B #1 5 points</td>
</tr>
<tr>
<td></td>
<td>Lab Report: Enzymes</td>
<td>50 points</td>
<td>Osmosis – 3B #2 20 points</td>
</tr>
<tr>
<td></td>
<td>Quizzes (4 @ 10 pts)</td>
<td>40 points</td>
<td>Enzymes – 4B (3x5) 15 points</td>
</tr>
</tbody>
</table>

Total = 470 points
Grand Total for course = 970 points

Specific information for each assignment will be handed out as needed. There are no extra credit assignments; however, there will be bonus points on exams and possibly bonus activities.

You do not keep exams, quizzes, or case studies.

C. Standards

Final grades will be assigned according to the following scale:
90-100%=A; 80-89%=B; 70-79%=C; 60-69%=D; <60% = F

Grade Calculation: your points earned divided by the total possible points times 100

D. Make-up Policy—Read Carefully!

Lab - Lab activities missed due to an excused absence might be made up by attending another lab section. Other labs occur during the day and night all week long. Plan ahead if possible. Special arrangements must be made in order for you to attend one of these other sections so should talk to me before you do it.

Lab practicals should be taken with your instructor because the questions vary for different instructors. Lab quizzes can be made up for excused absences. Documentation is required.

Lecture – The first time you miss a lecture exam; it cannot be made up regardless of the excuse. You will use the final exam at the end of the course to make up for that zero. If you have already missed an exam and you miss a second lecture exam, you must provide documentation of your absence. If your absence is excused, then you will take a different make-up exam. This second missed lecture exam can only be made up with a verifiable excuse. Know when your exams are going to occur and plan accordingly. You can use the final exam to replace a missed exam. If you must miss class anytime, call me (240-567-5127), email me shawn.lester@montgomerycollege.edu or call the office (240-567-5124) and leave a message for me. Note: Handwriting must be legible in order to receive credit on exam questions.

E. Late Policy

Assignments are due as stated on the lab syllabus. Assignments will lose 10% each day they are late regardless of the excuse. Everyday of the week counts (including weekends and holidays). For example: an assignment is due Thursday at 9 am. You turn it in at 9:10 am = -10%. You turn it in on Friday = -20%. You turn it in the following Tuesday = -60% etc.

F. Audit Policy

Students auditing this course must attend all labs and lectures just like any other student. You must participate in all lab activities and group lab reports. You are not required to take exams or quizzes.

G. Final Exam Policy

The final exams for lab and lecture are comprehensive and optional. They may be used to replace the lowest score, lecture for lecture, lab for lab, and they can also be used to replace a missed exam. Optional exams cannot hurt your grade. See syllabus for dates and times. Please arrive at the beginning of your scheduled exam. Students with accommodations (DSS) must let me know in advance if they are taking the optional lecture final; otherwise you must take in the same room with the rest of the class. Students who have made travel plans to leave the area before the end of finals will not be accommodated.

VI. Classroom Policies

A. Attendance

Students are expected to attend all lectures and labs. More than two unexcused lab absences will result in an “F” for the entire course. Being on time to lab matters; if you are late twice to lab (bad weather excluded), it will count as an unexcused absence. If you wish to withdraw from the course, you must do so officially. Please refer to the schedule of classes for dates and procedures. Simply not showing up for class the rest of the semester, will not result in an official withdrawal. If you do this, you will receive an “F”. 

Note: Handwriting must be legible in order to receive credit on exam questions.
Arriving late to class frequently is rude and disruptive. You have no right to do it. Please be on time (weather permitting). If you cannot make it to class, you can call my voice mail at 240-567-5127, the department's voice mail at 240-567-5124, or email shawn.lester@montgomerycollege.edu. All are available 24 hours/day. There is no excuse for not notifying me.

B. Academic Honesty
I will show you the respect and trust you deserve. Academic dishonesty will not be tolerated. Even asking another student about a single multiple-choice question can result in failure on the exam or the entire course. Group study is a great way to learn but your work is your own. Reports or other assignments that have been copied from one another will result in half or no credit for each conspirator. A student caught cheating on an exam will have 2 options: 1) you will immediately drop the course or, 2) I will fail you for the course and your grade history will show “Academic Dishonesty”. For more information, please refer to the Student Handbook section on “Academic Dishonesty and Misconduct”. On the web, go to http://cms.montgomerycollege.edu/WorkArea/DAsset.aspx?id=35945 (this link opens a PDF file).

C. Classroom Conduct
I will show you the respect and courtesy you deserve and I expect you to do the same for your fellow classmates and me. You are all here to learn. Please refrain from using or having others contact you on cell phones, pagers etc. For more information, please refer to the Student Handbook section on “Classroom Behavior”.

D. Support Services
A student who may need an accommodation due to a disability should make an appointment to see me during my office hours. A letter from Disability Support Services (DSS) authorizing your accommodations will be needed. The DSS office is located in CAB Room 122 and may be called on 240-567-5058, TTY 240-567-9672. Visit the web site at http://cms.montgomerycollege.edu/dss/. Important: Depending on your schedule, double-time students will take their exams immediately before, during, or immediately after the scheduled exam time—not at anytime during the day. Please note that DSS students do not receive double-time for group activities. We will meet to develop a plan to manage your accommodations.

E. Cancellation of Classes
The only time the Biology Department cancels classes is when the college closes. The college reports its status to all of the major television, radio stations, post announcements on the college web site, and sends email/text alerts. If the weather is inclement and you have not heard or the college has not made a decision yet, use your own judgment. This applies anytime there is severe weather. Your life is worth an absence! Just call or email me and let me know as soon as you can if you will miss class.

F. Cell Phones
Unless you have an urgent need such as children home alone, please turn off cell phones before class begins. Do not use them during class. Everyone will appreciate it!

G. Children on College Premises
Per college Policies and Procedures, Section 75005CP, Paragraph 1.C.: “…both supervised an unsupervised children are discouraged from visiting classrooms, libraries, centers, lecture halls, offices or other facilities without the approval of the faculty member or supervisor of the facility.” In addition, Paragraph 1.D.: “No children, whether supervised or unsupervised, are permitted in laboratories, gymnasiums, fitness centers, construction sites, maintenance facilities or other areas where their presence constitutes a danger to themselves or others.” The term ‘children’ means any persons under the age of 16.

H. First Exam
There will be several questions on the first exam concerning the policies and procedures in this syllabus. Make sure you study it!

I. Electronic Devices
You are not permitted to use any type of electronic device during an exam. This includes, but is not limited to, dictionaries and translators, listening devices with headphones, cell phones, i-pods, smart watches and any other wearable smart technology. They must be put away during exams. If you have a question about a word on the exam or what something means, ask me.

J. Written Communications
“stop uzn chtspk n ur writin. prob is when u need 2 tipe somthin prfssl u wont. hehe …lol”

Stop using "chatspeak" in your writing. The problem is that when you need to type something professional, you will inadvertently use "chatspeak" when is it not appropriate. The people on the receiving end will not be impressed. If you send me an email using chatspeak, I will not respond. When you send an email to someone who is not a friend or stranger in a chat room, use an appropriate greeting, ending, capitalize the first word of a sentence and the pronoun “I” etc.

K. Beginning and Ending
This course begins and ends as stated in the schedule of classes. The last day of this course is May 7th for regular class days and finals will occur during the following week. If for some reason you have planned not to be here that last week or you have planned a vacation during this course, you must drop the course now. You will not be accommodated and you will be failed for lack of attendance.
L. Shoes and Attire
Goggles and gloves are recommended for certain experiments. **SHOES MUST COVER THE ENTIRE FOOT.** Sandals, clogs, shoes that have open toes, open backs, heel straps, flip-flops, flats, high heels, moccasins etc. are not acceptable. **Socks are not shoes!** You may not be allowed to participate in lab without the proper shoes. This may count as an unexcused absence or 3 points deducted from your final grade for each offense.

Exposed skin should be kept to a minimum. Avoid halter tops, spaghetti straps, tank tops, anything sleeveless etc. Laboratory courses are generally considered hazardous, so dress appropriately.

The college has created a web page with many important links: [http://cms.montgomerycollege.edu/mcsyllabus/](http://cms.montgomerycollege.edu/mcsyllabus/)

Cheating, Academic Dishonesty, Recommendation Letters, Scantrons and Misc.

**Identical Assignments**
Although you may work together on homework, your assignments may not be identical (i.e., overwhelmingly the same) to each other. If this happens, everyone involved will receive a “0”. If it happens again, everyone will receive an “F” for the course.

**Copying Assignments from a Previous Semester**
Some students give all of their notes and assignments from the previous semester to their friends taking the course in the next semester. If I find that you are using last semester’s answers, you will receive an "F" for the course. How will I know this? I make slight changes in assignments so that a particular question may be similar but the answer is different.

**Students Caught Cheating on Exams**
If I catch you cheating on an exam, you will fail the course and your transcript will show ‘Academic Dishonesty’.

**Recommendation Letters**
Recommendation letters are a privilege granted by faculty. We are not required to write them. The minimum grade required to be considered is a “B”. It is my right to deny your request for any reason. I will only write a limited number of recommendations per semester.

**Once Assignments are Returned**
Once an assignment has been returned, late assignments will not be accepted.

**Assignments with Multiple Pages**
Assignments with multiple pages must be stapled. Assignments with paper clips and folded corners will not be accepted. When they are stapled they may be turned in late with a 10% penalty.

**Handwriting**
Handwriting must be legible. Written answers must be clear and make sense. It is not my job to interpret your written work. If I cannot read your writing or it makes no sense, you will either lose credit or receive no credit. This applies to assignments and exams.

**Photographing Exams, Case Studies, and other Assignments**
Exams, case studies, and all other assignments that you do not keep may not be photographed, copied, or recorded in any way. These actions constitute cheating. If you are caught doing these things, you will receive and “F” for the course! Even if you delete the images/recordings, you will still fail the course. It is the action, not the product that merits the “F”.

**Filling Out Scantrons**
Lecture exams are part multiple-choice and lab exams are all multiple-choice. All answers must be filled in on the Scantron. The only answers that count are on the Scantron. If you circle the correct answer on the test paper but fill in the wrong answer on the Scantron, you will not get credit for that answer. If you fill in more than one answer on the Scantron, you will not get credit for the one that is correct. The Scantron must be filled in during the exam not at the end! If you wait until the exam is over to fill in the Scantron, you will receive zero credit for the multiple-choice questions.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Chapter Campbell</th>
<th>Chapter OpenStax</th>
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</thead>
<tbody>
<tr>
<td>January</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>22</td>
<td>Introduction</td>
<td>1</td>
<td>1</td>
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<tr>
<td>24</td>
<td>Basic Chemistry</td>
<td>2</td>
<td>2.1</td>
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<tr>
<td>29</td>
<td>Chemistry: Importance of Water; Calculating solutions</td>
<td>3</td>
<td>2.2</td>
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<tr>
<td>31</td>
<td>Macromolecules</td>
<td>5</td>
<td>3</td>
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<tr>
<td>February</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>Cell Structure and Function</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Finish Cell lecture; Plasma Membrane (not on exam 1)</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td><strong>Exam 1 (chapters 1,2,3,5,6 Campbell; 1,2,1,2,2,3,4 OS)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Metabolism: Energy, ATP, and Enzymes</td>
<td>8</td>
<td>6</td>
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<tr>
<td>19</td>
<td>Cell Respiration</td>
<td>9</td>
<td>7</td>
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<tr>
<td>21</td>
<td>Cell Respiration, Summary Aerobic Respiration Activity</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>26</td>
<td>Respiration Case Study</td>
<td></td>
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<tr>
<td>28</td>
<td>Photosynthesis</td>
<td>10</td>
<td>8</td>
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<tr>
<td>March</td>
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<tr>
<td>5</td>
<td>Photosynthesis; Cell Respiration v. Photosynthesis Activity</td>
<td>10</td>
<td>8</td>
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<tr>
<td>7</td>
<td>Cell Reproduction (not on exam 2!)</td>
<td>12</td>
<td>10</td>
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<tr>
<td>12, 14</td>
<td><strong>Spring Break!!!!!!!!!</strong></td>
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<tr>
<td>19</td>
<td><strong>Exam 2 (chapters 7,8,9,10 Campbell; 5,6,7,8 OS)</strong></td>
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<tr>
<td>21</td>
<td>Meiosis and Sexual Life Cycles</td>
<td>13</td>
<td>11</td>
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<tr>
<td>26</td>
<td>Meiosis and Sexual Life Cycles cont.; Meiosis Activity</td>
<td>13</td>
<td>11</td>
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<tr>
<td>28</td>
<td>Molecular Basis of Inheritance (DNA Structure and Function)</td>
<td>16</td>
<td>14</td>
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<tr>
<td>April</td>
<td></td>
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<tr>
<td>2</td>
<td>Transcription: From Gene to RNA</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>Translation: From RNA to Protein</td>
<td>17</td>
<td>15</td>
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<tr>
<td>9</td>
<td><strong>Exam 3 (chapters 12,13,16 Campbell; 10,11,14 OS)</strong></td>
<td></td>
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<tr>
<td>11</td>
<td>Mendelian Genetics and the Gene Idea</td>
<td>14</td>
<td>12</td>
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<tr>
<td>15</td>
<td><strong>Last Day to Drop w/o a Grade</strong></td>
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<tr>
<td>16</td>
<td>Mendelian Genetics and the Gene Idea</td>
<td>14</td>
<td>12</td>
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<tr>
<td>18</td>
<td>Chromosomal Basis of Inheritance</td>
<td>15</td>
<td>13</td>
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<tr>
<td>23</td>
<td>Genetics Problems</td>
<td></td>
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<tr>
<td>25</td>
<td>Regulation of Gene Expression</td>
<td>18</td>
<td>16</td>
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<tr>
<td>30 May</td>
<td><strong>Exam 4 c (chapters 17,14,15,18 Campbell; 15,12,13,16 OS)</strong></td>
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<tr>
<td>7</td>
<td>Review for Optional Final Exam/Snow day make-up</td>
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<tr>
<td></td>
<td><strong>Comprehensive Final Exam d (2:45-4:45)</strong></td>
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</tbody>
</table>

aThis syllabus is tentative and subject to change.

bIn the event of a snow/weather/terrorist cancellation, check your college email for additional information.

cExams cover material from each lecture since the last exam up to and sometimes including the last lecture before the exam.

dThe final exam is optional. It may be used to replace the lowest score for a lecture exam.