MISSOURI WESTERN STATE UNIVERSITY
DEPARTMENT OF BIOLOGY
BIO 101-03 Principles of Biology Lecture
Fall 2008

Lecture Instructor: Melissa A. F. Daggett, Ph.D.
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Email: daggett@missouriumwestern.edu (preferred method of contact)
General Web site: http://staff.missouriumwestern.edu/~daggett/bio_101.htm
Office Hours: Monday, Wednesday and Friday 11:30 a.m. - 1:30 p.m.
Lecture: MTWF 2:00 - 2:50 p.m. Agenstein Hall 205
FINAL DATE: Wednesday, Dec 10th, 2:00 - 3:50 p.m.
Required Textbooks:
1. Essential Biology with Physiology, 2/e, Campbell, Reece and Simon, ISBN-10: 0805368418
2. CPS (ISBN: 978-1-881483-71-7) older models not acceptable (Class Key: M4141I338)

METHODS AND SCHEDULE
The lecture portion of this course will include the following methods: reading assignments, lectures, class
discussion periods, written assignments, regular quizzes or assignments and a final exam. A variety of
multimedia aids may be utilized including: slides, videos, and computer simulations. Students will be required to
use library and Internet resources for obtaining journal and newspaper articles and completing computer
assignments. A tentative lecture schedule is given at the end of this syllabus.

EVALUATION METHODS FOR BIO 101-03
FINAL GRADES ARE BASED ON:
1. LECTURE COMPONENT (75%)
   Lecture Exams (3 x 15%)
   Final Exam (15%)
   Quizzes & Assignments (15%)
2. LABORATORY COMPONENT (25%)
The above will be graded no stricter than as follows:
A= (90-100%), B= (80-89%), C= (70-79%), D= (60-69%), F= (< 60%)

ADDITIONAL INFORMATION FOR LECTURE
➢ Attendance and Grading Policy:
   • Attendance is mandatory: In order to improve student learning as well as to achieve compliance with
     federal financial aid policies, Western has a mandatory attendance policy for all 100 and 200 level
     courses. Instructors are required to monitor and track student attendance.
   • You will be given an excused absence will be given to a student acting as an official representative of the
     university, provided you give prior written verification from the faculty/staff supervisor of the event. The student
     must provide prior written verification signed by the faculty/staff supervisor of the event. (Email notification alone
     will not be accepted). (You may also get an excused absence for extreme circumstances of sickness, accident, etc, if approved by your instructor.)
   • All other absences will be deemed unexcused. The maximum number of unexcused absences (including
     labs) allowed for this class before the midterm report, October 15th is 9. Thus, when you have eight
     unexcused absences you will be reported to the Registrar’s Office, who will automatically withdraw you
     from this class. The Financial Aid Office will reduce financial aid as appropriate.
• If you are not present at the time your instructor takes roll, you are officially absent for the day.
• Conflicts due to extracurricular activities, including athletics, should be brought to the instructor’s attention as soon as possible. Failure to do so may result in an unexcused absence.

➢ Lecture Exams (15% X 3):
  • Three exams will be given as announced in class and weighted equally.
  • The date and format of exams will be announced in class. Possible formats include multiple choice, fill in the blank, essays or a combination of these formats. You are required to provide your own pen or pencil for every exam, as well your CPS responder.
  • Exam material will come from lecture, readings, assignments, videos, as well as any discussions that occur during lectures. Note that any information discussed during class may not be addressed in the readings and some of the readings may not be discussed in class.
  • Make-up policy: If an emergency prevents you from taking a scheduled exam you may take a make-up exam during the semester based on the following criteria:
    1. Notify the instructor by voice mail or email (giving your excuse) before the start of the scheduled exam.
    2. Arrange to complete the make-up exam ASAP. (You will not be able to return to lecture before arranging a date and time for the make-up exam. Failure to appear on time for the make-up exam will result in a zero for that exam.
    3. All make-up exams will be different from the regular lecture exam, possibly essay in nature, and may be inherently more difficult than the exam given in class.

➢ Final Exam: (15%)
  • First part: This part of the final will include questions over any material covered after Exam III.
  • Second part: This is the comprehensive part of the final and may include any information covered during the semester.
  • Make-up policy: Same as for lecture exams.

➢ Quizzes & Assignments (15%)
  • Students in BIO 101 section 3 should expect at least one or as many as 4 of these per week.
  • The instructions for quizzes or other assignments will vary significantly and will therefore be made available only at the time of being administered or assigned.
  • There will be no make-up quizzes or assignments available during the semester.
  • Consideration for dropping any quizzes or assignments will only be addressed at the end of the semester.

ADDITIONAL INFORMATION FOR THE LABORATORY
All students must be enrolled in a laboratory section. The lab section of Biology 101 is an important part of the course. Students will be expected to complete each assigned laboratory exercise and answer all of the questions in any lab handouts as directed by their lab instructor. There will also be a grading opportunity (quiz, etc.) during most laboratory meetings. If your lab instructor deviates from this pattern they will explain their methodology during the lab session. Any student leaving the lab before lab is completed, or without permission of the instructor, will receive a zero on that weeks grading opportunity. The lowest lab grading score will be deleted and a quiz average determined. This quiz-worksheet average will count as 25% of the final grade for the course. Any questions you have regarding lab requirements or grading should be addressed by your laboratory instructor.

Anyone caught purposefully damaging equipment in the lab will be dismissed from the lab with a grade of "0". Points may also be deducted for failure to clean up and/or put back equipment before leaving the lab. There are no make-up labs! If you are in a lab class that has been canceled for a particular day, you are excused from that activity. Faculty office hours are posted on the bulletin board in the Biology office suite (AH 201).
**ADDITIONAL INFORMATION FOR THE COURSE**

**Goals of the course:** Develop critical thinking skills enabling students to become scientifically literate citizens.

**General Studies Competencies:** Upon successful completion of Principles of Biology 101, students should be able to meet the following state-required institutional competencies:

- **Skill Areas:**
  - **Communicating:** Use mathematical, statistics, standard quantitative, or various graphical methods to present information with clarity, accuracy, and precision.
  - **Higher-Order Thinking:** 1) Analyze and synthesize information from a variety of relevant sources and use the results to address complex situations and problems. 2) Defend conclusions using relevant evidence and reasoned argument. 3) Reflect on and evaluate their critical-thinking processes.
  - **Managing information:** 1) Access and/or generate information from a variety of sources, including the most contemporary technological information services. 2) Organize, store, and retrieve information efficiently.

- **Knowledge Areas:**
  - **Mathematics:** 1) Recognize and use connections within mathematics and between mathematics and other disciplines. 2) Read, interpret, analyze, and synthesize quantitative data (e.g., graphs, tables, statistics, and survey data) and make reasoned estimates. 3) Apply and use mathematical models (e.g., algebraic, geometric, statistical), to solve problems.
  - **Life & Physical Sciences:** 1) Explain how to use the scientific method and how to develop and test hypotheses in order to draw defensible conclusions. 2) Evaluate scientific evidence and argument. 3) Describe the basic principles of the physical universe. 4) Describe concepts of the nature, organization, and evolution of natural systems. 5) Explain the effect of human interactions with natural systems.

- **BIO 101** is a 5 credit hour general studies course that satisfies part of the Category Two - Natural Sciences requirement for a baccalaureate degree at MWSU.

- **BIO 101** consists of both a lecture and laboratory component. Lecture sessions meet 4 days per week (MTWF) for 50 minutes, while the laboratory session meets 1 day per week for 110 minutes. You must stay enrolled and comply with the attendance policy in both components throughout the semester to receive credit for BIO 101.

- There are multiple sections of both the lecture and laboratory. The same general lecture and laboratory schedule will be followed by all sections, but each section is unique, therefore the information, assignments and exams given in one section do not apply to other sections. Make sure questions regarding expectations/grading are addressed by the instructor in charge of the lecture and laboratory section in which you are enrolled.

- **This course will not** satisfy the biology specific course requirements leading to a B.S. degree in the Department of Biology or as a prerequisite leading to the application and acceptance into various professional programs including Medicine, Dentistry, Pharmacy, Physical Therapy, etc. Appointments may be made with a pre-health profession advisor in the Departments of Biology or Chemistry if you have questions.

**STUDENTS WITH DISABILITIES:**

- Any student in this course who has a disability that prevents the fullest expression of abilities should contact me personally as soon as possible so that we can discuss class requirements.

- It will be to the advantage of students with disabilities requiring special accommodation to contact the Special Need Coordinator. The Special Needs Office is located in SS/C 202B. The coordinator will explain services to the student and assist the student with any school related problems that might be encountered. The number is 816-271-4330.
BIO 101 Academic Honesty Policy and Due Process
Academic honesty is required in all academic endeavors. Violations of academic honesty include any instance of plagiarism, cheating, seeking credit for another’s work, falsifying documents or academic records, or any other fraudulent classroom activity. Violations of academic honesty may result in a failing grade on the assignment, failure in the course, or expulsion from school. When a student’s grade has been affected, violations of academic honesty will be reported to the Provost or the designated representative. Please see the Western Academic Honesty policy and the student due process procedure. The handbook is available online at http://www.missouriwestern.edu/handbook/index.pdf.

Violations of Academic Honesty
Violations of academic honesty include, but are not limited to, the following activities:
1. Copying another person’s work and claiming it as your own.
2. Using the work of a group of students when the assignment requires individual work.
3. Looking at or attempting to look at an examination before it is administered.
4. Using materials during an examination that are not permitted.
5. Allowing another student to take a quiz or exam including a “clicker” quiz or exam for you.
6. Intentionally impeding the academic work of others.
7. Using any electronic device to transmit portions of questions or answers on an examination to other students.
8. Using any electronic device to improperly store information for an exam.
9. Providing false attendance data including “clicker” attendance for another student.
10. Knowingly furnishing false information to the University or its representatives.
11. Operating another students’ clicker or allowing someone else to operate your clicker.
12. Assisting other students in any of the acts listed above.

NOTE: “Clicker” misuse as described above will result in permanent dismissal from class and a grade of F.

Definition of Plagiarism
Plagiarism is a specific kind of academic dishonesty in which you take another’s ideas or words and claim them as your own. When you draw on someone else’s work, you must indicate the source of that material, whether you are repeating another’s words, argument or thought. Even if you paraphrase another’s work and are not using the exact wording, you are still required to indicate the source of the material. This material must be clearly identified with appropriate citations. If you do not do that, you have plagiarized those materials. Any time you copy and paste any writing that is not your own for an assignment, you must use quotation marks and give the source of that material. If you cut and paste without noting what you have done, you will be guilty of plagiarism. Even if the writing is your own, if it has been used for a previous assignment that should be indicated.
<table>
<thead>
<tr>
<th>Week of</th>
<th>Chapter</th>
<th>Topic (tentative and subject to change)</th>
<th>Laboratory</th>
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<tbody>
<tr>
<td>8/25</td>
<td>Chapter 1 , 14</td>
<td>Introduction: Biology Today</td>
<td>Lab Safety and the Microscope</td>
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<tr>
<td>9/1</td>
<td>Chapter 18</td>
<td>The Ecology of Organisms and Populations</td>
<td>Scientific Investigations with Planaria: Behavior and Cloning I</td>
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<tr>
<td>9/8</td>
<td>Chapter 19</td>
<td>Communities and Ecosystems</td>
<td>Scientific Investigations with Planaria: Behavior and Cloning II</td>
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<td>9/15</td>
<td>Chapter 20</td>
<td>Human Impact on the Environment</td>
<td>The Pond Ecosystem Meet at the Conservation Building</td>
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<tr>
<td>9/22</td>
<td>Chapter 2 &amp; 3</td>
<td>EXAM 1 Essential Chemistry The Molecules of Life</td>
<td>Exploring Terrestrial Ecosystems I: The Forest Meet at the Conservation Building</td>
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<td>9/29</td>
<td>Chapter 4</td>
<td>A Tour of the Cell</td>
<td>Exploring Terrestrial Ecosystems II: The Southern California Desert (a simulation) Meet at the Conservation Building</td>
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<td>10/6</td>
<td>Chapter 5</td>
<td>The Working Cell</td>
<td>Chemistry (Organic molecules in food) Meet at the Conservation Building</td>
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<td>10/13</td>
<td>Chapter 6</td>
<td>Cellular Respiration</td>
<td>Photosynthesis and Cell Respiration I</td>
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<td>10/20</td>
<td>Chapter 7</td>
<td>EXAM 2 Photosynthesis</td>
<td>Photosynthesis and Cell Respiration II</td>
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<tr>
<td>10/27</td>
<td>Chapter 8 &amp; 9</td>
<td>Cellular Reproduction Patterns of Heredity</td>
<td>Investigating Fermentation and Biofuels I</td>
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<tr>
<td>11/3</td>
<td>Chapter 10 &amp; 11</td>
<td>The Structure and Function of DNA How Genes are Controlled</td>
<td>Investigating Fermentation and Biofuels II</td>
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<tr>
<td>11/10</td>
<td>Chapters 12</td>
<td>DNA Technology</td>
<td>Investigating Heredity and Changes in Gene Frequencies I</td>
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<tr>
<td>11/17</td>
<td>Chapter 13 &amp; 14</td>
<td>EXAM 3 How Populations Evolve How Biological Diversity Evolves</td>
<td>Investigating Heredity and Changes in Gene Frequencies II</td>
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<tr>
<td>11/24</td>
<td>Chapter 15</td>
<td>The Evolution of Microbial Life</td>
<td>No Labs Thanksgiving Break</td>
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<tr>
<td>12/1</td>
<td>Chapter 21</td>
<td>Unifying Concepts of Animal Structure and Function</td>
<td>Homeostasis: The Human Circulatory System</td>
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<tr>
<td>Dec. 10th</td>
<td>EXAM 4: FINAL</td>
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