GENERAL BIOLOGY 201 - Summer 2015

COURSE DETAILS

Instructor: Dr. Jeb Bevers

Office: TBA

Office Hours: Likely to be just before and after class.

Mailbox: Science Support Center, Science Bldg II, Room 238C. Make certain the secretary understands to place any material turned in here to be placed into my mail box in the Biology Office.

Phone: 725-3851, Biology Office

e-mail: jeb_bevers@yc.edu

Text: Biology: Science for Life with Physiology, Belk and Maier, Custom Edition for Portland State University

Expectations:

General Biology is a demanding course, yet straight forward. You will have a large vocabulary to learn. There will be discussions in class with questions related about sets of interconnected concepts.

I expect you to attend and participate in class. Though it is a moderately large class, questions and discussions of the material are encouraged. Reading the text will be helpful and supplement the lecture, but test materials will largely come from lecture content and class discussions. Any area of the book which we do not cover, but I expect you to know for an exam I will specify beforehand. Though the lectures will follow the book closely, I will introduce related and recent material from outside of the text during class. Any material presented or discussed in lectures can be used on the exams. In addition, required reading material from the text, not covered in class, may be on the exam as well.

Lecture notes will be available on electronic reserve at the library. This does not mean that you should not attend the class. Most students learn best by several reviews of the material.

What the class is, what it is not:

This is a non–majors’ Biology class. If you are a biology major, or are considering becoming a biology major, or are in a major requiring more advanced biology, you need to be not in this class, but rather in the Principles of Biology sequence (BI 251–253).
Academic Honesty
Students are expected to observe the Student Conduct Code. All work on exams, written assignment, and non-group activity quizzes are expected to be individual with no help (intended or otherwise) from other students. **The written assignment will not allow for any plagiarism of the review of your reference material.** Any plagiarism will receive a 0 for the assignment.

Grading

Formal evaluation for the grade will be based on exams, written assignments and participation points. Please note that **there will be absolutely no make up exams, no matter what the reason for the absence.** Just to reiterate that point: if you miss an exam, you will not be given the opportunity to make it up. If you are a student with a documented disability and registered with the Disability Resource Center, please contact me immediately to facilitate arranging academic accommodations.

A percentage of the points earned in the course will determine the letter grade:

<table>
<thead>
<tr>
<th>Points Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>80-89</td>
<td>B</td>
</tr>
<tr>
<td>70-79</td>
<td>C</td>
</tr>
<tr>
<td>60-69</td>
<td>D</td>
</tr>
<tr>
<td>Below 60</td>
<td>F</td>
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</tbody>
</table>

There are 250 possible points

<table>
<thead>
<tr>
<th>Points Source</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>160</td>
</tr>
<tr>
<td>Participation</td>
<td>10</td>
</tr>
<tr>
<td>Pop quiz</td>
<td>10</td>
</tr>
<tr>
<td>Group discussions (unannounced)</td>
<td>70 (10 or 15 pts each)</td>
</tr>
</tbody>
</table>

We have 12 class meeting days. During the academic year there would be 11-12 weeks of class, so each meeting day covers the equivalent of one week’s material. Needless to say, missing class will make it more difficult to keep pace with the material and to perform well in the course. Since there are 2 exams and 6 group discussions or pop quizzes, most days we will have one or more graded activity in the course.

The first two exams are worth 40 points and the final exam is a total of 80 points. **Please bring scantron forms and a number two pencil for the exams.** Form # 882 or 882ES works for this and is available for purchase at the PSU bookstore.

Participation points are based upon non-graded conceptual study questions, class assignments (not in the syllabus), and discussions in the class. Role may be taken overtly or covertly by the
Everyone begins with 10 points but undue disruption of the class from talking may result in decreased participation points for the individuals involved.

Cell phones in lecture are disruptive to the learning environment and should only be used outside the classroom or during class breaks. Cell phone shall be placed in an off position, placed in your bags or clothing and are not to be held in the hand during lecture or exams.

One extra credit assignment of up to 10 points is allowed. This can be from one of two possible projects. If you choose to complete one of these assignments have them stapled before you hand them in. They are due the beginning of class on Monday, July 6th. Do not enclose them into a plastic folder or insert, which may appear nice, but is impractical for grading, unnecessary for this assignment, and will likely last beyond the life of the pyramids as likely will the trillions of other pieces of 21st century plastic garbage.

Option 1: A written assignment, approximately 2 pages, double spaced, typed report on a paper related to nutritional research which I will hand out to you by Wednesday, July 2nd. You must inform me that you want to do this assignment by Tuesday July 2nd in order that I may make the appropriate number of copies for this assignment. This assignment should have a citation of the author(s), title, year, publisher and pages used, if an excerpt from a book. If it is from a journal or magazine then the citation should be in the following format:

Author. Year, Title. Journal or Publisher if a book, Volume Number and pages.


Option 2: A detailed visual rendition (which should include some creativity, multiple diagrams, and/or considerable labeling) of two concepts covered in the course. This should include a description and or notations of the concept and a reference listing of any sources used for this. The visual representation can fold out to a larger perspective, but needs to be handed in as a standard 8 ½ x 11 paper.

Option 3: Turn in a two page (typed, double spaced) summary and critique of a science documentary. The documentary must be one hour in length. You need to include the title, year, narrator, and producing organization (ex. National Geographic, NOVA, Scientific American Frontiers, Life on Earth, etc.). Summarize the information in the documentary, including what research was described, plus the researchers. What did you learn from the documentary and did any of it relate to the course material? Also include a couple of paragraphs critiquing the documentary. This should include what how well the documentary held your interest, did you want to know more, was the information well presented, what would you have changed in the filming or method of information presented, etc. else should have been included, and how.

This above extra credit assignments are optional.
The best way to do well is to keep up with the reading and lecture material. Review the lecture notes for the exams by active studying (rewriting your notes, write study cards, etc). Ask questions if you are not certain of concepts or material covered.

Active vs. Passive Studying:

Active study techniques, such as rewriting notes, making note cards of the material, outlining concepts and applications are valuable active study techniques, and group review of the material. For many people rewriting the concepts and examples onto note cards to repeatedly study improves their efforts and scores. Another active method, helpful to people with more auditory learning styles, would be for you to verbally repeat this material to yourself while studying.

The exam material will combine basic definition knowledge with conceptual applications of the material.

<table>
<thead>
<tr>
<th>Date</th>
<th>Chapter</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon, 6/22</td>
<td>Introduction and begin Ch 2</td>
<td>Life on Earth and Beyond? Universal Properties of Life</td>
</tr>
<tr>
<td>Tues, 6/23</td>
<td>2, cont.</td>
<td>Quiz, Chemistry and Cell Structure</td>
</tr>
<tr>
<td>Wed, 6/24</td>
<td>2, 3</td>
<td>Tree of Life, Cell transport, nutrition, enzymes and metabolism</td>
</tr>
<tr>
<td>Thu, 6/25</td>
<td>3</td>
<td>Exam 1, continue with prior topics</td>
</tr>
<tr>
<td>Mon, 6/29</td>
<td>3, 4</td>
<td>Metabolism and Cell respiration and photosynthesis</td>
</tr>
<tr>
<td>Tues, 6/30</td>
<td>4, 5</td>
<td>Cancer, mitosis and meiosis</td>
</tr>
<tr>
<td>Wed, 7/1</td>
<td>6</td>
<td>Mendelian Genetics</td>
</tr>
<tr>
<td>Thu, 7/2</td>
<td>6, 7</td>
<td>Exam 2 and course topics</td>
</tr>
<tr>
<td>Mon, 7/6</td>
<td>7</td>
<td>Genetic Pedigrees, DNA fingerprinting</td>
</tr>
<tr>
<td>Tues, 7/7</td>
<td>7, 8</td>
<td>Genetics and Biotechnology</td>
</tr>
<tr>
<td>Wed, 7/8</td>
<td>8</td>
<td>Biotechnology cont.</td>
</tr>
<tr>
<td>Thur, 7/9</td>
<td></td>
<td>Final</td>
</tr>
</tbody>
</table>
Sample Test Questions:

1. Parents with blood types B and AB could produce children with all of the following blood types except
   a. A
   b. B
   c. AB
   d. O
   e. A and B

2. Chromosomes, other than those involved in sex determination, are known as
   A. nucleosomes
   B. heterosomes
   C. alleles
   D. autosomes
   E. liposomes

4. A pH that indicates the lowest concentration of hydrogen ions is indicated by the number
   a. 1.0
   b. 5.5
   c. 7.0
   d. 7.4
   e. 14.0

5. During what stage in meiosis does crossing over between homologous chromosomes occur?
   a. metaphase I
   b. prophase II
   c. anaphase I
   d. metaphase II
   e. prophase I

6. Diffusion rates tend to be increased by
   a. lower concentrations of a substance
   b. larger molecular size
   c. increased temperatures
   d. lower pressures
   e. neutrally charged molecules

7. The Krebs cycle takes place within the
   a. ribosomes
   b. chloroplasts
   c. mitochondria
   d. nucleus
   e. cytoplasm
Grading matrix

Though material content overlaps with the Bio 104 labs, the lecture and lab grades are independent of each other. The lecture grades are based on a maximum of 250 points possible. You may keep track of your own grades by tallying your subtotals against the possible points for all activities.

<table>
<thead>
<tr>
<th>Participation 10</th>
<th>Quiz 1</th>
<th>Exam 1</th>
<th>Exam 2</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 pts</td>
<td></td>
<td>40 pts</td>
<td>40 pts</td>
<td>80 pts</td>
</tr>
<tr>
<td>Group 1 10 pts</td>
<td>Group 2 10 pts</td>
<td>Group 3 10 pts</td>
<td>Group 4 10 pts</td>
<td></td>
</tr>
<tr>
<td>Group 5 15 pts</td>
<td>Group 6 15 pts</td>
<td>Extra Credit</td>
<td>Total/250 possible</td>
<td></td>
</tr>
</tbody>
</table>

Lecture material and the syllabus can be located at the following link:

https://d2l.pdx.edu/

You will need to login to your d2l site with your odin account name and password. If you do not have this set it up ASAP with the Office of Information Technologies (OIT). To access this, log into your registered account to view and use the materials for the associated lab class.