**GENERAL BIOLOGY (BIOL 1B)** T/Th 1-2:15 Lecture 2:30-5:20 Lab

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Website: [www.laney.edu/wp/amy\_bohorquez](http://www.laney.edu/wp/amy_bohorquez) office hours: M-Th 12-1pm (B251 or lab)

Our department website: <https://laney.edu/biology/>

**Course Description**: BIOL 1B is a continuation of BIOL 1A. This course covers the origin of life, evolution, classification, plant structure and function, ecology. BIOL1A is a prerequisite. It will serve as a base for learning more about the specific areas of biology in other courses.

**Discussion Topics**: (both semesters are listed here)

*BIOL 1A BIOL 1B*

Cell Biology and biochemistry (Ch 1-12) Biodiversity (Ch 26-34)

DNA and Genetics (Ch 13-21) Plants form & function (Ch 35-39)

Animals, form and function (Ch 40-51) Evolution (Ch 22-25) & Ecology (Ch 52-56)

**Materials required**:

Textbook: Biology by Campbell Van de Graaff’s Photographic Atlas

Lab Handouts on Canvas Site for BIOL 1B Scantron for Exam # 1

“Bully for Brontosaurus” by Stephen J. Gould “Why Big Fierce Animals Are Rare” By Paul Colcineaux

**Student Learning Outcomes -** Big picture topics that I would hope you gather through the semester.

1) Explain the complexity of ecosystems, the component parts and humans place in the ecosystem. Critique current methods of dealing with ecosystems and ecological issues through discussion and seminar papers.

2) Demonstrate an awareness of continued threats to our global ecosystems and appraise individual efforts in environmental issues.

3) Explain how all organisms are connected by cell structure, energy sources and evolutionary lineage in class discussion and on exams. Correlate information on cell structure and animal systems learned in Bio 1A with evolutionary lineage discussed in Bio 1B.

4) Synthesize the information in class on ecology, evolution and organismal diversity in a research paper and oral presentation on a given topic.

5) Write clear, well organized lab reports. Draw accurate representations of microscope slide images to identify organisms of the living world in the laboratory. Analyze the results of laboratory experiments and evaluate sources of experimental error.

**Format and General Information**

Biology is a complex and interconnected subject. Sometimes questions in lecture will lead us to explore topics that do not seem directly related to the subject matter at hand, but are important. Many students find it helpful to read the chapters before the lectures. You should print out the lab with enough time to read it over before class. After the initial explanation of the lab activities, you will work individually or in groups to complete the assignment. You are expected to budget your time to complete the assignment and you can decide when to take your breaks. If you finish your lab assignment early, you are encouraged to use the time for reviewing, asking questions from the lecture topics, or completing written work.

**Participation/Class Expectations (30 points)**:

You are expected to attend every class, arrive on time, and stay until the end of class. You are required to check out of the lab every day. If you have not done the work you are not allowed to turn in a lab report and get credit for the work done that day. Your participation points are partially graded on

1) Coming to the class late disrupts the class for your fellow students and instructor. If you will be routinely late due to coming from another class, another campus or job, or due to the transportation schedule, please let me know.

2) You are responsible for knowing all the information in this course information and syllabus. Please read over the calendar and take the syllabus quiz that is online to show me that you have read over this information. Changes to the syllabus (due to rescheduling for field trips, availability of lab supplies, or unexpected situations that arise during the semester) will be announced and written on the board. You are expected to note those changes down on your own syllabus.

3) During class, I expect that you will be focused on the material, avoid using the internet or your phones during lecture and will be respectful to the people in the room.

4) You are responsible for dropping yourself from the course.

**Assessment (800 points):**

Exams (400 points)

To assess your understanding of lecture material, reading and lab activities, there will be 4 exams worth 100 points each. Exams will cover material for lecture and lab and are closed book. You must be able to recognize and define the terms learned in class and answer T/F, multiple choice, fill in or short essay questions. Exams 1 will require a scantron and a number 2 pencil. Exams 2, 3 and 4 will have lab practicals as well as a written part to the exam. During the lab practical, you have a limited time for each station. You must work quickly to identify and correctly answer questions about microscope slides, figures or models. You will move from station to station at the direction of the instructor.

If you feel a question is not clear, you may ask me to clarify during the exam. Cheating will result in a zero for the exam, possible notification of the Dean and/or failure of the course and suspension from the school. Do NOT talk during exams for any reason. Do NOT answer your cell phone or use it for any reason. *I do not give make up exams unless you contact me ahead of time. Please be aware of dates and plan ahead.*

Quizzes (20 points)

There are two quizzes that you must complete online. One covers the material in this handout and the calendar. The second is a review of your microscope knowledge. To use the microscopes in lab, you have to score 100% on the microscope quiz.

Lab Reports (200 points)

Lab reports will be turned in throughout the semester involving sketches, answers to questions, and observations and data analysis of results obtained in class. Late lab reports will be accepted (with a penalty) but only until the Exam covering that material is given. If we use the microscope, you are expected to provide a sketch with labels of what you see in the lab report. **Be sure to label your slides!** The expected information to be included in the lab report will be explained at the beginning of class.

Informal Reports: You are required to turn in 10 informal reports throughout the semester. They are graded at 10, 8 or 5 points. These will include sketches and/or questions from the lab handout. Informal reports will be due at the next lab period. You must turn in at least 2 per test section.

Formal Reports: You are required to turn in 4 formal reports throughout the semester – one per test section. These lab reports should be typed and submitted digitally via Canvas. The first formal lab has a pre-lab assignment associated with it. See Canvas for specifics. Formal lab reports are noted on the calendar with an asterisk (\*). They are due at 1pm (before class) 1 week after the lab was completed. The due date in Canvas will be for the second option. Be sure you turn it in on time.

Seminar Paper (20 points)

There will be a seminar paper due discussing essays from “Why Big Fierce Animals are Rare”, and “Bully for Brontosaurus”. The paper will be due before class starts and will be submitted via Canvas. You will be asked to pick your chapters early to group students discussion. Be sure you have your submission with quotes to help facilitate the discussion of the book. You must be present for the discussion to turn in your paper. See more specific details on Canvas.

Field Trip (25 points)

We will be going on multiple field trips during the semester. Two will occur during lab time, others will occur on other days. You are required to fill in one field trip report. You can turn in one other report for extra credit.

Research Paper and Oral Presentation (100 points)

A cumulative research paper on an assigned topic will be due. You will be asked to submit your topic early in the semester. At the end of the semester you will give an oral presentation on your research project. This project combines information learned throughout the semester. See directions and additional aspects of the assignment on Canvas.

Extra Credit: There will be opportunities for extra credit. See Canvas for more information.

**Grading Scale**

Your grade is based on points. You have a “Keep Track of your Progress” sheet to be able to calculate your grade at any time throughout the semester. You are required to turn in the grades page with a running total two times – see calendar for dates. The class is 800 points total.

90 – 100 % A

80 – 89 % B

70 – 79 % C

60 –69 % D

below 59 % F

**Asking Questions:**

If you have a question while during lecturing, please feel free to raise your hand. I encourage questions about the material – remember that if you are confused, chances are other students are also confused! If you have a question that is not related to the topic we are working on, or is not appropriate for the lecture period, please see me during the lab period or office hours.

*It is our goal to make our courses as accessible as possible to students all of our students. We encourage you to chat with me by the second week of the course regarding any accommodations that will improve your experience in this course. You can also contact the Disability Services and Programs for Students at 464-3428 for assistance.*

**TENTATIVE SCHEDULE FOR BIOL 1B**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
| 20-Jan | 21-Jan | 22-Jan | 23-Jan | 24-Jan | 25-Jan |
|  | Intro, Ch 52 - Ecology |  | Ch 55 Ecosystems |  |  |
|  | Biomes Lab |  | Lake Merritt - Keys |  |  |
| 27-Jan | 28-Jan | 29-Jan | 30-Jan | 31-Jan | 1-Feb |
|  | Ch 56 Global Change |  | Ch 54 Comm Ecology |  | Last day to add |
|  | Climate Change - IPCC |  | Community Ecology\* |  | & to drop w/o W |
| 3-Feb | 4-Feb | 5-Feb | 6-Feb | 7-Feb | 8-Feb |
|  | Ch 53 - Popl' Ecology |  | Ch 53 - Popl' Ecology |  |  |
|  | Succession\* |  | Popl'n Growth |  |  |
| 10-Feb | **11-Feb** | 12-Feb | 13-Feb | 14-Feb | 15-Feb |
|  | **Exam #1 Ch 52-56 & labs** |  | Ch 25/26 History of Earth |  |  |
| **Topic Due** | How the Earth was Made |  |  | HOLIDAY | HOLIDAY |
| 17-Feb | 18-Feb | 19-Feb | 20-Feb | 21-Feb | 22-Feb |
| Holiday | Darwin and Wallace (online) |  | Ch 22 Darwinian View |  |  |
| (Labor Day) | library assignment |  | Natural Selection |  |  |
| 24-Feb | 25-Feb | 26-Feb | 27-Feb | 28-Feb | 29-Feb |
| **Bibliography** | Ch 23/24 Evol of Pop |  | Ch 27 Bacteria & Archea |  |  |
| **Due** | Population Genetics |  | Bacteria\* |  |  |
| 2-Mar | 3-Mar | 4-Mar | 5-Mar | 6-Mar | 7-Mar |
|  | Ch 28 Protists/Phylogeny |  | Ch 31 Fungi |  |  |
|  | "Protists" |  | Fungus |  |  |
| 9-Mar | **10-Mar** | 11-Mar | 12-Mar | 13-Mar | 14-Mar |
|  | **Exam #2 Ch 22-27 & labs** |  | *EBMUD Field Trip* | Last day to file |  |
|  | **lab material** |  | **Seminar Papers Due** | AA/AS |  |
| 16-Mar | 17-Mar | 18-Mar | 19-Mar | 20-Mar | 21-Mar |
|  | Ch 32 Animal Kingdon |  | **PD Day for us - no classes** |  |  |
|  | Porifera & Cnideria |  |  |  |  |
| 23-Mar | 24-Mar | 25-Mar | 26-Mar | 27-Mar | 28-Mar |
| **Outline** | Ch 33 Inverts |  | Ch 33 Inverts | 1 - *Monterey Bay* |  |
| **w/citations** | Platy, Annl, Molls |  | Nematods & Arthopods | *Aquarium FT* |  |
| 30-Mar | 31-Mar | 1-Apr | 2-Apr | 3-Apr | 4-Apr |
|  | Ch 34 Vertebrate Evol |  | Ch 47 Animal Development |  |  |
|  | Vertebrates & Echinoderms |  | Chordates |  |  |
| 6-Apr | 7-Apr | 8-Apr | 9-Apr | 10-Apr | 11-Apr |
|  | Ch 34 Vertebrate Evol |  | **Exam #3 CH 32-34,47 & lbs** |  |  |
|  | Human Evolution\* |  | **lab material** |  |  |
| 13-Apr | 14-Apr | 15-Apr | 16-Apr | 17-Apr | 18-Apr |
| Spring Break |  |  |  |  |  |
| 20-Apr | 21-Apr | 22-Apr | 23-Apr | 24-Apr | 25-Apr |
|  | Ch 30 Plant Diversity | Last day to | Ch 30 Plant Diversity | Last day to |  |
| **Paper Due** | Moss and Ferns | withdraw is 4/25 | Gymnosperms | withdraw |  |
| 27-Apr | 28-Apr | 29-Apr | 30-Apr | 1-May | 2-May |
|  | Ch 38 Angiosperms |  | Ch 38 Plant Physiology |  |  |
|  | Floristics\* |  | Angiosperms & seeds\* |  |  |
| 4-May | 5-May | 6-May | 7-May | 8-May | 9-May |
|  | Ch 37/39 Nutrition/Signals |  | *UC Botanical Gardens* |  |  |
|  | Angiosperm anatomy |  | Review |  |  |
| 14-May | 15-May | 16-May | 17-May | 18-May | 19-May |
|  | Presentation Week |  |  | HOLIDAY | Sat. class |
|  |  |  |  | Malcom X Day | Finals |
| 21-May | **22-May** | 23-May | 24-May | 25-May | 26-May |
|  | **Exam #4** |  |  |  |  |
| Finals | Finals | Finals | Finals | Finals |  |
| Items listed on Monday imply that the assignment is due that week. See Canvas for the specific date | | | |  |  |
| 1) Formal labs due – these are the labs with an asterisk. They are due 1 week after the lab was completed and will be graded at 25, 20, 15 points. (1 per test section) | | | | | |
| 2)  Informal Labs – questions and/or sketches will be turned in for these labs at the next lab meeting. They are graded at 10, 8 or 5 pts. (at least 2 per test section) | | | | | |

Keeping Track of Progress BIOLOGY 1B Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Informal labs (100) title

#1 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#2 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#3 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 4 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 5 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 6 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 7 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 8 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 9 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 10 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Formal Labs (100)

# 1 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 2 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 3 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 4 \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Papers (45)

Field Trip Report \_\_\_\_ Seminar paper 1 \_\_\_\_

Exams (420)

Quiz 1 \_\_\_\_/10 Quiz 2 \_\_\_\_/10

Exam 1 \_\_\_\_/100 Exam 2 \_\_\_\_/100

Exam 3 \_\_\_\_/100 Exam 4 \_\_\_\_/100

Final Paper (100)

Final Report (60 possible) \_\_\_\_ Grading Fellow Students (10) \_\_\_\_

Bibliography (5) \_\_\_ Outline (5) \_\_\_\_ Oral Presentation (20) \_\_\_\_

To determine your grade: add up your points you received and divide by the points possible in the class so far. Multiply that number by 100 for a percentage.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Extra Credit** | **Overall Total pts earned by you** | **%**  **& letter grade** | **What grade do you want to earn? (pts)** | **How many points do you need for that grade?** | **Are there enough points left in class?**  **(give # of pts left)** |
| ***example*** | ***points earned*** | ***your pts***  ***possible so far*** | ***A (720)*** | ***720 – your pts =*** | ***800 – possible so far =*** |
|  | **1)** |  |  |  |  |
|  | **2)** |  |  |  |  |

* You are to turn this page in (completed with a total) twice, however you can turn it in at any time to check your grade

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