Biology 10 – Introduction to Biology

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**Required text:** Essentials of Biology w/Physiology, Campbell (provided e-text via Mastering)

Laney College Lab Manual

Lecture workbook is available in the bookstore

**Description:**

This class is an introduction to the science of biology for non-majors. We cover the f**undamentals of biology for the non-major:  Scientific inquiry, biological chemistry, cell structure and function, DNA and genetics, evolution and ecology, and an overview of living organisms.**  This class also i**ncludes laboratory exercises designed to complement lectures.** As a first semester course, we will also be addressing study skills for Biology and biological thinking.

###### LEARNING OUTCOMES - My Practical Goals for you

* Differentiate between a hypothesis and a theory
* Discuss the principles of biology as the study of living things including biological hierarchies, classification of living things, chemical processes of the cell and organisms.
* Improve confidence in scientific knowledge and ability to apply knowledge to related situations.
* Read and discuss articles related to current issues in biology. Form opinions on these issues and express and defend those opinions biologically in discussions and written essays.

###### LAB GOALS -

* Cooperate with others working as a group, delegate work to others, collaborate with group.
* Use microscopes and other equipment correctly and care for them properly.

##### ASSESMENT OF THESE GOALS

**WRITING ASSIGNMENT - To help you become more involved in the world of science…**

You are assigned two writing assignments to complete this semester. For each testing section, you need to find a current topic in the news that relates to what we are discussing in class. Then, you will to write a 2 page of analysis on your article, 5-paragraph form. In the essay, be sure you address the topic, the name of the researcher or research group and where the research was conducted. You should explain what the research is, what benefit it has to the world, how it relates to the course material (a sentence that starts with ‘this relates to class’ is good) and why the research is important. See attached essay grading rubric for specifics on what is required of you, include the rubric each time you turn it in so we can see if you are improving. **Due the week before your lecture exam.**

**STUDY GUIDE ASSIGNMENT - To help you prepare for exams…...**

To encourage you to utilize the study guide to its fullest, you can earn points by answering all the questions on the study guide for exam 1 or 2. To earn full credit, you must write out the question then write out a complete answer. This may be a word, a sentence, or a long complex answer so be thorough. Try using a separate piece of paper for each section. We recommend that you complete the first one for credit, then you can increase your score if you need to with the second one. We’re hoping that once you see how much it improves your scores you do this for all the tests. As well as increasing your test scores, you can earn up to 30 pts this way, so make sure you put in the time. **Due the day of the lecture exam (except final exam).**

**MASTERING BIOLOGY ASSIGNMENTS - To prepare you for class……**

There will be assignments complete using the Mastering Biology software that you have access to this semester. Those assignments will be posted in lecture for a total of 10 pts for each test section. Be sure you are in class to ensure you have all the information you need. It is important that you set up your login information ASAP.

**LECTURE EXAMS - To assess your understanding of the material presented in class….**

There will be three lecture exams (each worth 100pts) consisting of a material covered in lecture and reading from text. Tests may include multiple choice, true/false, matching questions, short answer and essay questions to help you learn to explain the reasons for your answers. **If you are late to an exam, you lose 1pt per minute after the start of the exam so be on time and there are no make-up exams are given**, so be sure you’re in class! If an emergency occurs, contact us ASAP.

It is a good idea to review your exam once it’s graded. If you believe your answer is correct and you can explain it biologically speaking, you can turn that in, in writing, to try to gain points. **Due 1 week from the date you took the exam.**

**LAB WORK - To assess your ability to conduct experiments and answer questions on the material….**

You are responsible for completing the work in your lab book during the lab session. To receive full points, you must show me your completed lab (summary questions and all) before you leave each day. This will count as your attendance and your lab points (5 pts per lab x 13 labs). Be sure you read the lab before you come to lab. If you need to miss a lab, you can come to a different section if you tell us ahead of time. **You are welcome to check your answers at the end of lab or during office hours.**

**LAB PRACTICALS - To assess your understanding of the material you learned in the lab….**

There will be 3 lab practicals give during the semester. These exams are designed to test your knowledge of both the experimental procedures and the hypotheses tested for each experiment. The exams consist of stations with questions for you need to answer within a limited time as well as a few short answer questions. Plan on the exam taking 1 hour, leaving early may result in a penalty. You may not leave the exam before being released by your instructor. **We suggest making vocabulary and activity lists for each lab.**

*Be sure you are aware of tests that occur on a day that is not your usual lab day. Make arrangements beforehand, or talk with your lab instructor to pick a time that day if you have a conflict*

**CALENDAR & GRADES PAGE ASSIGNMENTS – To help you organize your time**

We’ve included a calendar to help you get organized. Included are the labs for both the MW and TTh sections in case you need to miss a class. Write in the due dates for assignments of other classes or dates other exams, work schedules, study times, etc. You can download a digital version via Canvas if you’d like to edit for your 10 section. Once this is filled out, you will submit it to us. Turning in the Calendar is your acknowledgement that you are aware of dates when you might need to come to lab on an alternative date, dates assignments are due and exam dates. **This is due in the 3rd week of class!** We also ask that you fill out the grades page two times during the semester, with totals. Be sure to read the directions for both.

**PARTICIPATION - To be sure you are keeping up with the requirements of the class overall…**

Each person is expected to attend class regularly, to be prompt, and to be well prepared. You are graded on not just showing up, but participating and being prepared. In lab, this includes cleaning up your lab area before you leave the classroom, putting your microscope away correctly, pushing in your lab stool and being respectful of your fellow students, the instructor and the class. You will be given points dependent upon how well you achieve these goals. Everyone starts with 70% of participation points and those points will go up or down depending on you!

## ASKING QUESTIONS/ASKING FOR EXTRA HELP

If you have a question during lecture, please raise your hand. If there is still confusion after Questions are not only welcome, but also encouraged. You have embedded tutors in your labs that are also available M-Th from 12-1pm. You can come to lab early to utilize our tablets where you can access your online support material and ask for help. Be sure you read the labs ahead of time so you can note if you have questions.

**LEARNING DISABLED STUDENTS**

Students with verifiable disabilities will be accommodated as per college policy. Please make contact with disabled student services at 464 -3428, if you need their services to be available for your success. It’s my best intention and wish for you to succeed and I’ll make this course as accessible as possible for you to achieve that goal. Please communicate with me in advance of your disability either during my office hours or after lab hour by the second week of the course

**ACADEMIC INTEGRITY**

In the long run, dishonesty will not help you in school, or your professional career. Cheating includes using cell phones for any reason during exams, attempting to copy (or copying) any information from others on quizzes, lab practicals, exams or lab notebook information or anything else deemed cheating by instructor. ***Do not talk during exams for any reason!*** Ask me for help in you need it. The penalty can be a 0 on the assignment, a subtraction of points from your total, an “F” in the course and/or referral to the Dean of the College. See Department Policy if you have questions

**The grades you earn in this class are based on your performance:**

Syllabus & Microscope Quizzes (10 pts each) 20 pts

Calendar (10 pts) & Grades Page (2 x 5pts) 20 pts

Essays (2 @ 25 points each) 50 pts

Study Guide (for 1 test) 30 pts

Mastering Assignments (10 pts per section) 30 pts

Exams (3 @ 100 pts. each) 300 pts

Labwork (5pts a day) 65 pts

Lab Practicals (3 @ 50 pts) 150 pts

Participation/Effort (15 lecture/20 lab) 35 pts

**TOTAL:** 700 pts.

Letter grades are determined by percent: A 90 – 100% (630-700 pts)

B 80 – 89% (560-629 pts)

C 70 – 79% (490-559 pts)

D 60 – 69% (420-489 pts)

F below 59.9% (<419 pts)

\*\*\*Any late work will be **penalized 2 points for each day is it late**, so 1 week late = 14 point loss\*\*\*

**Extra Credit** is available through participating in Lake Clean-up throughout the semester. If you work on Saturdays, see your Canvas shell for other options. Some options include visiting local zoos, science museums, parks and science lectures. **There is a limit of 1 extra credit assignment per testing section** with a total of 30 points maximum. Once the test has been taken, the opportunity is lost so try to plan ahead. You will turn it in through Canvas.

**It is your responsibility to drop out from the class by College due date. Do Not Depend on Me to Do That for You!** Protect yourself from receiving an "F" for a class that you stopped attending at some point in the semester!

If you have any concerns about the class, please feel free to discuss them with me. If the situation calls for it, the biology department co-chairs may be contacted via email (Amy Bohorquez, abohorquez@peralta.edu, and Rebecca Bailey, rbailey@peralta.edu)

**SPRING 2018 SEMESTER SCHEDULE Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Calendar Assignment** – Below you see the lab schedule for both the MW and TTh sections of BIOL 10. You also see the related text chapters that will likely be covered each week. To help you organize your semester, we ask that you gather all the syllabi from your other classes and any other schedules that you know ahead of time. Then, write in the dates of exams, papers, etc. You can also download this via the Canvas shell to make edits digitally. Once this is filled out, you will submit it to us, showing that you are aware of dates when you might need to come to lab on an alternative date, dates assignments are due and exam dates.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
| Jan 22 **Syllabus Quiz** | Jan 23 | Jan 24 | Jan 25 | Jan 26 | Jan 27 |
| inquiry | inquiry | inquiry | inquiry |  |  |
| *Chapters 1 &2* |  |  |  |  |  |
| Jan 29 | Jan 30 | Jan 31 | Feb 1 | Feb 2 | Feb 3 |
| chemistry | chemistry | chemistry | chemistry |  | **2/5**: Last day to |
| *Chapters 2 & 3* |  |  |  |  | add & drop w/o W |
| Feb 5 **Microscope Qz** | Feb 6 | Feb 7 | Feb 8 | Feb 9 | Feb 10 |
| Microscope | microscope | microscope | microscope |  |  |
| *Chapters 3 & 4* |  |  |  |  |  |
| Feb 12 **Calendar** | Feb 13 | Feb 14 | Feb 15 | Feb 16 | Feb 17 |
| Molecules | molecules | molecules | molecules |  |  |
| *Chapter 4 & 5* |  |  |  | HOLIDAY | HOLIDAY |
| Feb 19 | Feb 20 | Feb 21 | Feb 22 | Feb 23 | Feb 24 |
|  | cells | cells | cells |  |  |
| HOLIDAY | *Chapters 5 & 6* | **Essay Due** | **Essay Due** |  |  |
| Feb 26 | Feb 27 | Feb 28 | Mar 1 *Chapter 6* | Mar 2 | Mar 3 |
| cells | **Practical 1** | **Practical 1** | breathing oxygen |  |  |
|  | **Lec Exam 1 (F170)** | **Lec Exam 1 (F170)** |  |  |  |
| Mar 5 | Mar 6 | Mar 7 | Mar 8 | Mar 9 | Mar 10 |
| breathing oxygen | breathing oxygen | breathing oxygen | making new cells |  |  |
| *Chapters 7 & 8* |  |  |  |  |  |
| Mar 12 | Mar 13 | Mar 14 | Mar 15 | Mar 16 | Mar 17 |
| making new cells | making new cells | making new cells | DNA | Last day to file |  |
| *Chapters 8 & 10* |  |  |  | for AA/AS |  |
| Mar 19 | Mar 20 | Mar 21 | **Mar 22** | Mar 23 | Mar 24 |
| DNA | DNA | DNA | **PD DAY - no class** |  |  |
| *Chapters 10 & 9* |  |  |  |  |  |
| Mar 26 | Mar 27 | Mar 28 | Mar 29 | Mar 30 | Mar 31 |
| changing DNA | changing DNA | changing DNA | changing DNA |  |  |
| *Chapters 11 & 12* |  | **Essay Due** | **Essay Due** |  |  |
| Apr 2 *C. Chavez Day* | Apr 3 | Apr 4 | Apr 5 | Apr 6 | Apr 7 |
| **SPRING BREAK** |  |  |  |  |  |
| Apr 9 | Apr 10 | Apr 11 | Apr 12 | Apr 13 | Apr 14 |
| Lab meets Wed | Lab meets Thurs | **Practical 2** | **Practical 2** |  |  |
| **Lec Exam 2 (F170)** | **Lec Exam 2 (F170)** | *Chapter 14* |  |  |  |
| Apr 16 | Apr 17 | Apr 18 | Apr 19 | Apr 20 | Apr 21 |
| microbes & fungus | microbes & fungus | microbes & fungus | microbes & fungus |  |  |
| *Chapters 13 & 15* |  |  |  |  |  |
| Apr 23 | Apr 24 | Apr 25 | Apr 26 | Apr 27 | Apr 28 |
| plants evolution | plants evolution | plants evolution | plants evolution |  |  |
| *Chapters 16 & 17* |  |  | Last day drop w/W |  |  |
| Apr 30 | May 1 | May 2 | May 3 | May 4 | May 5 |
| animal survey | animal survey | animal survey | animal survey |  |  |
| *Chapters 18 & 19* |  |  |  |  | NO SAT. CLASSES |
| May 7 | May 8 | May 9 | May 10 | May 11 | May 12 |
| human evol | human evol | human evol | human evol |  |  |
| *Chapters 20 & 21* |  |  |  |  |  |
| May 14 | May 15 | May 16\*\*\* | May 17\*\*\* | May 18 | May 19 |
| **Practical 3** | **Practical 3** |  |  | HOLIDAY |  |
|  |  |  |  | Malcolm X | Sat. class Finals |
| May 21 | May 22 | May 23 | May 24 | May 25 | May 26 |
| **10 - Final Exam (F170)** |  |  | **10 - Final Exam (F170)** |  |  |

\*\*\*Last Day to turn anything in!

**Biology Writing Assignment Grading Chart**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1) Date \_\_\_\_\_\_\_\_\_\_2) Date\_\_\_\_\_\_\_\_\_\_

You are assigned two writing assignments to complete this semester. These essays will be your evaluation of a recent article in the newspaper or on the Internet concerning a topic we are covering in class. I recommend using [www.sciencedaily.com](http://www.sciencedaily.com) and check out that day’s news.

1. Find a current topic in the news that relates to what we are discussing in class.
2. Write about 2 page of analysis on your article following the chart below using 5-paragraph form:

*Introductory paragraph*

A. Catches the reader's interest

B. Gives brief background on your topic

C. Begins or ends with the [thesis statement](http://www.sheboyganfalls.k12.wi.us/staff/dehogue/FSSH/thesis.htm)

*Body (paragraphs 2, 3, & 4)*

A. Develops, expands, and/or supports the thesis statement

B. Includes a [topic sentence](http://www.sheboyganfalls.k12.wi.us/staff/dehogue/FSSH/parag.htm) for each paragraph

C. Includes supporting details which reinforce the topic sentence.

d. **Make sure you explain how it relates to class**

i..“This relates to class because…”

*Concluding paragraph*

A. Restates the thesis or sums up the argument.

B. Tells the reader what you think is important to remember

C. Never introduce new information in the conclusion

\*\* These are due the week before the lecture exam, yet you can turn it in any time before then.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Points | 5 – Great! | 4 – Good | 3 – Okay | 2 – Not okay | 0 |
| Relevance Article | Specifically about application of a class topic and well tied to class | Inaccurate data or analysis | General topic of class or not tied to class | General topic & not tied to class | Not relevant, no analysis |
| Current Article | Daily publications article from this month  (web-link needed) | Article from monthly magazine | Article from last month | Article from last semester | Article from past year or no date provided |
| Paragraph Structure | Topic statement first, strong intro & conclusion | Good topic statement, new data mid-way | Missing intro or conclusion paragraph | No obvious paragraph topic | No intro, conclusion or topics |
| Summary of Information | Presented:  Summary of data  Named researchers  Goals of projects, Relevance of information | Missing one of the previous items | Missing two of the previous items | Missing three of the previous items | Missing all of the previous items |
| Followed Directions | 5 paragraph form, article analysis, good paragraph & sentence structure, no misspelling or grammatical errors | Missing one of the previous items | Missing two of the previous items | Not correct form or analysis but no errors | Poor paragraph or sentence structure, misspellings |

Overall Point Total

Total Points \_\_\_\_\_\_/25 Total Points \_\_\_\_\_\_/25

Comments:

GRADES RECORD - This needs to be updated turned in to your lab instructor – see calendar for due dates. If you are not earning at least a C when you turn this in the first time, please include an Action Plan for how you are going to pass the class.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Lecture Exams** | |  | **Lab Practical** | |  | | **Quizzes (10pts)** | |  | |
| **1)** | |  | **1)** | |  | |  | |  | |
| **2)** | |  | **2)** | |  | |  | |  | |
| **3)** | |  | **3)** | |  | |  | |  | |
|  | |  |  | |  | |  | |  | |
| **Lab work (5 pts each)** | | | **Study Guide (30 pts)** | |  | | **Essay (25 pts each)** | | | |
| 1) | 11) | | 1) | |  | | 1) | |  | |
| 2) | 12) | |  | |  | | 2) | |  | |
| 3) | 13) | |  | |  | |  | |  | |
| 4) |  | | **Calendar (10pts)** | |  | |  | |  | |
| 5) |  | | 1) | |  | | **Homework (15 points each)** | | | |
| 6) |  | |  | |  | | 1) | |  | |
| 7) |  | | **Grades Page (5 each)** | |  | | 2) | |  | |
| 8) |  | | 1) | |  | |  | |  | |
| 9) |  | | 2) | |  | |  | | | |
| 10) |  | |  | |  | |
| **Lab work total** | **1)** | |  | |  | |
|  | **2)** | |  | |  | |
|  |  | |  | |  | |
| **Extra Credit points** | **Overall Total pts earned by you** | | **% &**  **letter grade** | **What grade do you want to earn?** | | **How many points do you need for that grade? (#)** | | **Are there enough points left in class? (Include # of pts left)** | |
|  | **1)** | |  |  | |  | |  | |
|  | **2)** | |  |  | |  | |  | |

* To find your %, divided the points you’ve earned by the total possible
* To find out how many points you need, subtract what you’ve earned from the total number points for the grade you want (see grade breakdown)
* To find the number of you points left, subtract what we’ve finished from 700