## Introduction to Biology (BIOL 10)

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## Required text:

- Essentials of Biology w/Physiology, Campbell (option for digital textbook)
- Computer or device were you can upload documents/photos, watch videos and take quizzes
- Reliable internet service to access Canvas and be able to take timed exams
- BIOL 10 lab manual 2019 \& Lecture Notes BIOL 10


## Description:

This class is an introduction to the science of biology for non-majors. We cover the fundamentals 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 includes 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 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. You will be submitting this assignment digitally via Canvas, Due the week before your lecture exam, yet, you can turn it in early! Check the dates the assignment is open for submission along with the grading rubric for specifics.

## 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).

## HOMEWORK (HW) ASSIGNMENTS - To prepare you for class......

We have some assignments to help you explore different topics. Those Homework (HW) assignments will be listed in the module for a total of 15 pts of Homework points for each test section. Be sure you follow the module in order so you have all the information you need. The grades will be hidden until I have a chance to review. If submit assignments twice, you may see your scores before I do, so be aware that your score may change. The "due" date posted is the day recommend to complete the work. However, the assignments may be open for an additional day so you can ask for assistance if you need help completing the work.

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. To help you prepare, there are practice quizzes ( 3 pts each) for each topic and correlate to the study guide questions. Try them out to see how well you are understanding the material. Exam are open for 48 hours and you have 1 hour to complete the test once it starts so plan accordingly.

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 3 days after the date you took the exam.

LAB WORK - To assess your ability to conduct experiments and answer questions on the material....
Your labs to complete at home almost every week. Check the schedule for which labs to conduct when. The "due" date post is the day recommend that you complete the work. However, they are open for an additional day so you can ask for assistance if you need help completing the work. To receive full points, you must submit your completed lab (summary questions and all) online via Canvas This will count your lab points ( 5 pts per lab x 13 labs). Be sure you read the lab before you start the lab. The answer keys will be posted online after the last day to submit you are responsible for checking your answers to ensure you have the most accurate information. Bring your questions to the check in days or tutoring times.

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 you need to answer within a limited time as well as a few short answer questions. Exam are open for 48 hours and you have 1 hour to complete the test once it starts so plan accordingly. We suggest making vocabulary and activity lists for each lab and try the practice practicals first.

## CALENDAR \& GRADES PAGE ASSIGNMENTS - To help you organize your time.....

We've included a calendar to help you get organized. 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 assignments are due and exam dates. We also ask that you fill out the grades page two times during the semester with totals and then meet with us to review your scores. Do not use Canvas for your overall grades, use this form. Be sure to read the directions for both.

## DISCUSSIONS - To help be a part of a scientific community...

As part of our online learning community participation, you have Discussions to take part on in Canvas. You can also set up Conferences with each other to create study groups. You'll see directions for each discussion with a grading rubric.

## PARTICIPATION - To be sure you are keeping up with the requirements of the class overall...

Each person is expected to attend class regularly, and to participate in the office hours, discussions and virtual interactions with your fellow students and professors. Setting up a schedule when you regularly work on the class is important to your success in the class. Participation includes timely posting in discussions and replies to colleagues, check ins/office hours with instructor, working in groups for lab work/discussions of data. If we meet in the lab that will include following safety/masking protocols and cleaning the lab area before you leave. 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

Questions are not only welcome, but also encouraged you have a few places to ask your questions. There will be scheduled check in days, Discussion boards to work out questions with your group, online meeting times with our tutors or instructors. We also suggest setting up Conferences with our Group and with us. If you have any concerns about the class, please feel free to discuss them with us.

## ACCESSIBILITY

It is our goal to make our courses as accessible as possible to students all of our students. We encourage you to chat with us 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. Also check out the Student Support Link links in your Canvas shell.

## 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. 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 on these assignments. You can keep track with the Grades Page and check your total with us at any time.

| Syllabus \& Microscope Quizzes (10 pts each) | 20 pts |
| :--- | :--- |
| Calendar (10 pts) \& Grades Page (2 x 5pts) | 20 pts |
| Discussions (5 pts each) | 30 pts |
| Practice Quizzes (3 pts each) | 60 pts |
| HW Assignments (15 pts per section) | 45 pts |
| Essays (2 @ 25 points each) | 50 pts |
| Study Guide (for test 1 or 2) | 30 pts |
| Labwork (5pts a day) | 65 pts |
| Exams (3 @ 100 pts. each) | 300 pts |
| Lab Practicals (3 @ 50 pts) | 150 pts |
| Participation/Effort (15 lecture/15 lab) | 30 pts |
| TOTAL | 800 pts |

Letter grades are determined by percent:
A $\quad 90-100 \%$ (720-800 pts)
B $\quad 80-89 \%$ ( $640-719 \mathrm{pts}$ )
C $\quad 70-79 \%$ ( $560-639 \mathrm{pts}$ )
D $\quad 60-69 \%$ (480-559 pts)
F below 59.9\% (<480 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!

Laney College does not discriminate on the basis of age, race, religion, color, gender identity, gender expression, sexual orientation, ancestry, citizenship, national origin, military or veteran status, disability, marital status, pregnancy, medical condition, and immigration status.
$\qquad$ 1) Date $\qquad$ 2) Date $\qquad$
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 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

Body (paragraphs 2, 3, \& 4)
A. Develops, expands, and/or supports the thesis statement
B. Includes a topic sentence 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 of the lecture exam, yet you can submit Canvas in any time before then. No paper copies are accepted.

| 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: <br> 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 $\qquad$ /25

Total Points $\qquad$ /25

GRADES PAGE - This needs to be updated turned in to your lab instructor - be sure you are in class for announcements concerning due dates. If you are not earning at least a $C$ when you turn this in the first time, please meet with us to go over an Action Plan for how you are going to feel more comfortable with the material.

| ASSIGNMENT TYPE | SPECIFIC ASSIGNMNT | YOUR SCORE | POSSIBLE POINTS |
| :---: | :---: | :---: | :---: |
| QUIZZES | SYLLABUS |  | 10 |
|  | MICROSCOPE |  | 10 |
| CALENDAR | Other side of this page |  | 10 |
| GRADES PAGE | \#1 |  | 5 |
|  | \#2 |  | 5 |
| WRITING ASSGMTS | \#1 |  | 25 |
|  | \#2 |  | 25 |
| STUDY GUIDE | (for exam 1 or 2 only) |  | 30 |
| HW ASSGMTS | For First Exam |  | 15 |
|  | For Second Exam |  | 15 |
|  | For Third Exam |  | 15 |
| PRACTICE QUIZZES | $20 \times 3$ pts each |  | 60 |
| DISCUSSIONS | $6 \times 5$ pts each |  | 30 |
| LABWORK | \#1 (5 labs) |  | 25 |
| Be sure to record | \#2 (4 labs) |  | 20 |
| your scores | \#3 (4 labs) |  | 20 |
| LECTURE EXAMS | \#1 |  | 100 |
|  | \#2 |  | 100 |
|  | \#3 |  | 100 |
| LAB PRACTICALS | \#1 |  | 50 |
|  | \#2 |  | 50 |
|  | \#3 |  | 50 |
| PARTICIPATION | LECTURE |  | 15 |
|  | LAB |  | 15 |
|  | TOTAL \#1 |  |  |
|  | TOTAL \#2 |  |  |

overall class total 800
Now, figure out where you are at in class by filling in this section:

| Extra <br> Credit | Overall Total <br> pts earned by <br> you | What grade do <br> \% letter grade <br> you want <br> earn? (pts) | How many points <br> do you need for <br> that grade? | Are there enough <br> points left in class? <br> (give \# of pts left) |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| example | points earned | $\frac{\text { yourpts }}{\text { possible so far }}$ | A(720) | 720 - your pts $=$ | 800 - possible so far = |
|  | 1) |  |  |  |  |
|  | 2) |  |  |  |  |

Ask for help figuring this out if you need it!!

