Biology 11 – Principles of Biology

**Instructor:** Amy Bohorquez **voicemail:** 510.464.3472

**Office Hours:** T/Th 12-1pm B267 or B202 (1hr TBA) **email:** abohorquez@peralta.edu

**Website address:** <http://elaney.org/wp/amy_bohorquez/>

**Required text:** Essentials of Biology w/Physiology, Campbell

Scantron forms (3 total; 50 on each side)

Recommended 🡪 My lecture notes are 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.** As a first semester course, I will also be addressing study skills for Biology and biological thinking.

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

* Take an active role in ones own education by taking personal responsibility for learning, learn to explain topics in students own words, understanding the need to stay on top of material given
* Discuss the correlations between environmental and socioeconomic issues
* Differentiate between a hypothesis and a theory in writing on exams
* 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.

##### ASSESMENT OF THESE GOALS

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

You are assigned three 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. For testing section, you need to find a current topic in the news that relates to what we are discussing in class. Then, you need to write about 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 and why it 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 I can see if you are improving. **Due the lecture day before each 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. 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. You can get credit for completing one of the three, but I’m 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.**

**HOMEWORK ASSIGNMENTS - To help understand the application of the information…..**

There will be 3 assignments I will hand out to you that you will finish at home. These are also found in the lab manual for Bio 10 and start with the Chemistry Concepts Lab, then the Photosynthesis/Respiration and Evolution. Each is worth 10pts so be sure to work on them carefully.

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

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

There will be three lecture exams each consisting of a material covered in lecture and reading from text that are worth 100 points each. Tests include multiple choice, true/false and matching questions. As the semester moves forward, exams will also include short answer and essay questions to help you learn to explain your 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 me ASAP.

To learn from your mistakes and understand more about your test-taking skills, you should go over your test once it’s returned to you. You may re-earn half of the points you missed on your lowest scoring test by completing test corrections for the exam. These corrections need to be in writing with each question, the correct answer explained biologically, your answer and why you chose the answer you did. If you believe your answer is correct and you can explain it biologically speaking, you can also submit that in writing. **Due 1 week from the date you took the exam.**

**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. This also includes cleaning up before you leave the classroom, and being respectful of your fellow students, the instructor and the class. You will be given points dependant on how well you achieve these goals

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

Essays (3 @ 25 points each) 75 pts

Study Guide (for 1 test) 30 pts

Homework Assignments (3 @ 10 pts) 30 pts

Exams (3 @ 100 pts. each) 300 pts

Participation/Effort (15 lecture) 15 pts

**TOTAL:** 450 pts.

Letter grades are determined by percent: A 90 – 100% (405 - 450 pts)

B 80 – 89% (360 - 404 pts)

C 70 – 79% (315 - 359 pts)

D 60 – 69%

F below 59.9%

**ACADEMIC INTEGRITY**

In the long run, dishonesty will not help you in school, or your professional career. Cheating includes attempting to copy (or copying) any information from others quizzes, lab practicals, exams or lab notebook information. ***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

## Asking Questions/Asking for Extra Help:

If you have a question during lecture, please raise your hand. If there is still confusion after repeating the information, please see me individually at another time, or contact me through email or voicemail. If you having a problem with the course in anyway, please feel free to meet with me as soon as possible. Questions are not only welcome, but also encouraged. Remember! This class is your responsibility so let me know if you need help.

# TENTATIVE SCHEDULE AND IMPORTANT DATES

May change if necessary

|  |  |  |
| --- | --- | --- |
| **Week of** | **Lecture Topic** | **Chapters** |
| **1/23** | Intro to Biology | 1 |
| **1/30** | Chemistry | 2 |
| **2/6** | Molecules of Cell | 3 |
| **2/13** | Cell structure & function | 4/5 |
| **2/20** | Chemical Energy | 6/7 |
| **2/27** | **Essay 1 due Tuesday**  **Lecture Exam 1 Thursday** | **8** |
| **3/5** | Cellular Reproduction | 9 |
| **3/12** | Mendel, Genetics & DNA | 10/11 |
| **3/19** | Evolutionary Thought | 13 |
| **3/26** | **Essay 2 due Thursday** | 14 |
| **4/2** | ***Spring Recess – No Class*** |  |
| **4/9** | **Lecture Exam 2 Tuesday**  Overview of Life | 14 |
| **4/16** | Multicellular Organisms | 15 |
| **4/23** | Multicellular Organisms | 16 |
| **4/30** | Multicellular Organisms | 17/18 |
| **5/7** | Ecology & Environment | 19 |
| **5/14** | Animal Overview  **Essay 3 due Thursday and last day to turn anything in!** | 21 |
| **5/21** | LECTURE FINAL EXAM – 5/24 at 10am!!! | |

**Extra Credit** is available through participating in Lake Clean-up throughout the semester. If you work on Saturdays, see me for alternative projects. Some options include visiting local museums and zoos.

There is a limit of 1 extra credit assignment per testing section with a total of 30 points maximum

**Attachments:**

I’ve included a calendar to help you get organized. I recommend you write in the due dates for assignments of other classes or dates other exams, work schedules, study times, etc. Also included is the grading rubric for your essays and a place to record your grades to be sure you know how you are doing in class at all times. Be sure to read over these and turn them in when due.

SPRING 2012 – BIOLOGY 11 CALENDAR

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MONDAY | TUESDAY | | WEDNESDAY | | THURSDAY | | FRIDAY | | SATURDAY | |
| Jan 16 | Jan 17 | | Jan 18 | | Jan 19 | | Jan 20 | | Jan 21 | |
|  |  | |  | |  | |  | |  | |
| HOLIDAY (MLK) |  | |  | |  | |  | |  | |
| Jan 23 | Jan 24 | | Jan 25 | | Jan 26 | | Jan 27 | | Jan 28 | |
|  | intro to biology | |  | | chemistry | |  | |  | |
| Classes begin |  | |  | |  | |  | |  | |
| Jan 30 | Jan 31 | | Feb 1 | | Feb 2 | | Feb 3 | | Feb 4 | |
|  | molecules | |  | | molecules | |  | |  | |
|  | homework due | |  | |  | |  | | Last day to add | |
| Feb 6 | Feb 7 | | Feb 8 | | Feb 9 | | Feb 10 | | Feb 11 | |
|  | molecules | |  | | cells | |  | |  | |
| Census Day |  | |  | |  | |  | |  | |
| Feb 13 | Feb 14 | | Feb 15 | | Feb 16 | | Feb 17 | | Feb 18 | |
|  | cells | |  | | energy | |  | |  | |
|  |  | |  | |  | | HOLIDAY | | NO SAT/SUN | |
| Feb 20 | Feb 21 | | Feb 22 | | Feb 23 | | Feb 24 | | Feb 25 | |
|  | Photosynthesis | |  | | respiration | |  | |  | |
| HOLIDAY |  | |  | |  | |  | |  | |
| Feb 27 | **Feb 28** | | Feb 29 | | Mar 1 | | Mar 2 | | Mar 3 | |
|  |  | |  | |  | |  | |  | |
|  | **Essay 1 Due** | |  | | **Lecture Exam 1** | |  | |  | |
| Mar 5 | Mar 6 | | Mar 7 | | Mar 8 | | Mar 9 | | Mar 10 | |
|  | Cell Division | |  | | Cell Division | |  | |  | |
|  |  | |  | |  | |  | |  | |
| Mar 12 | Mar 13 | | Mar 14 | | Mar 15 | | Mar 16 | | Mar 17 | |
|  | Genes and Genetics | |  | | Genes and Genetics | |  | |  | |
|  |  | |  | |  | | Last day to file for AA/AS | |  | |
| Mar 19 | Mar 20 | | Mar 21 | | Mar 22 | | Mar 23 | | Mar 24 | |
|  | Genetic Disorders | |  | | Biochemistry | |  | |  | |
|  |  | |  | |  | |  | |  | |
| Mar 26 | Mar 27 | | Mar 28 | | **Mar 29** | | Mar 30 | | Mar 31 | |
|  | Evolutionary Processes | |  | | Evolutionary Processes | |  | |  | |
|  |  | |  | | **Essay 2 Due** | |  | |  | |
| **Apr 2** | **Apr 3** | | **Apr 4** | | **Apr 5** | | **Apr 6** | | **Apr 7** | |
|  |  | |  | |  | |  | |  | |
|  |  | |  | |  | |  | |  | |
| Apr 9 | **Apr 10** | | Apr 11 | | **Apr 12** | | Apr 13 | | Apr 14 | |
|  | **Lecture Exam 2** | |  | | Overview of timeline | |  | |  | |
|  |  | |  | |  | |  | |  | |
| Apr 16 | Apr 17 | | Apr 18 | | Apr 19 | | Apr 20 | | Apr 21 | |
|  | bacteria/archea | |  | | protists | |  | |  | |
|  |  | |  | |  | |  | |  | |
| Apr 23 | Apr 24 | | Apr 25 | | Apr 26 | | Apr 27 | | Apr 28 | |
|  | fungus | |  | | plants | |  | |  | |
|  |  | |  | |  | |  | |  | |
| Apr 30 | May 1 | | May 2 | | May 3 | | May 4 | | May 5 | |
|  | plants | |  | | animals | |  | |  | |
| Last day to drop w/W |  | |  | |  | |  | |  | |
| May 7 | May 8 | | May 9 | | May 10 | | May 11 | | May 12 | |
|  | animals | |  | | ecology | |  | |  | |
|  |  | |  | |  | |  | |  | |
| May 14 | May 15 | | May 16 | | May 17 | | May 18 | | May 19 | |
|  | ecology | |  | | anatomy overview | |  | | Sat. classes end | |
|  |  | |  | | **Essay 3 Due** | | HOLIDAY (Malcolm X) | | Finals (Sat. classes) | |
| May 21 | May 22 | | May 23 | | **May 24** | | May 25 | | May 26 | |
|  |  | |  | | **10 - Bio 10/11** | |  | |  | |
| Finals |  | |  | |  | |  | |  | |
| May 28 | May 29 | | May 30 | | May 31 | | Jun 1 | | Jun 2 | |
|  |  | |  | |  | |  | |  | |
| HOLIDAY (Mem. Day) |  | |  | |  | |  | |  | |
|  | | |  | |  | |  | |  |  |

Biology Writing Assignment Grading Chart

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1) Date \_\_\_\_\_\_\_\_\_\_2) Date\_\_\_\_\_\_\_\_\_\_3) Date \_\_\_\_\_\_\_\_\_\_

You are assigned three 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.

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.

*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 lecture day 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 | Article from monthly magazine | Article from last month | Article from last semester | Article from past year |
| 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 | Not 5 paragraph form, but good analysis | Followed directions, but hard to follow essay | Not correct form or analysis but no errors | Poor paragraph or sentence structure, misspellings |

Overall Point Total

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

Comments:

\*\* Turn in this exact sheet with each essay

GRADES RECORD

|  |  |  |  |
| --- | --- | --- | --- |
| **Lecture Exams (100 each)** |  | **Study Guide (30)** | **Participation** |
| **1)** |  | 1) | lecture - |
| **2)** |  |  |  |
| **3)** |  |  |  |
|  |  |  |  |  |
| **Essay (25 pts each)** | | **Homework (10 points each)** | |  |
| 1) |  | 1) |  |  |
| 2) |  | 2) |  |  |
| 3) |  | 3) |  | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |
|  | Extra Credit | **Overall Total** | % / letter grade |  |
|  |  | **1)** |  |  |
|  |  | **2)** |  |  |
|  |  | **3)** |  |  |

* To find your %, divided the points you’ve earned by the total possible
* This needs to be updated each time you turn in your essay