BSC 104 - Introduction to Biology - Syllabus

Fall 2018

**Teacher:** Samantha Thacker

**Contact: sthacker@cbawv.org**

**Office Hours:** M-F 7:15-3:10

**Textbooks:**

* Campbell Essential Biology 6th Edition by Simon, Dickey, Hogan, and Reece, Pearson Pub. (required) (other close editions will be acceptable)
* Lab Manual Introduction to Biology for the Non-major by Weinstein, 2012 (required) (purchase at Marshall University Bookstore)

**Course Description:** Fundamentals of biology with emphasis on the unity of life, energetics, genetics, evolution, classification of organisms in the kingdoms of life. Intended for non-science majors. Does not count toward a major in Biological Science.

**University Policies:**

Academic Dishonesty: You are responsible for knowing the University's policies, which can be found in the student handbook or at these web addresses: http://www.marshall.edu/catalog/undergraduate-catalogs/ (search for dishonesty in the current catalog)

Social Justice: Absolutely NO student will be discriminated against based on race, ethnicity, sex, age, sexual orientation, social class, health condition, or religion.

Disabilities: University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone 304 696-2271 to provide documentation of their disability.

**Anticipated Learning Outcomes:**

|  |  |  |
| --- | --- | --- |
| **Course student learning outcomes** | **How students will practice each outcome in this course** | **How student achievement of each outcome will be assessed in this course** |
| Students will apply the themes that recur throughout biology  | Group competitive quizzesIn-class practice questions Chapter quizzes  | Quizzes Examination  |
| Students will identify and apply key elements that occur in all living things. They will be able to describe these on a cellular level as well as organism level | Group competitive quizzes In-class practice questions Chapter quizzes Lab exercises  | Quizzes Examination Lab exercises |
| Students will apply the scientific method to novel problems - design experiments and draw conclusions from outcome | In-class discussions Lab exercises  | Examination Lab exercises  |
| Students will read, interpret, and apply scientific data  | In-class article discussions Lab exercises  | QuizzesExamination Lab exercises  |

**Course Requirements/Due Dates:**

Weekly Quizzes

Daily Quizzes

Test 1

Test 2

Test 3

Final Exam

Weekly lab papers

Monday of the week the material is taught

At the beginning of each class

Sept. 21

Oct. 17

Nov. 30

Dec. 14 (Required)

Friday of each week

**\*All dates are subject to change upon the discretion of the instructor**

**Grading Policy:**

Your grade will be determined by your score on several in-class quizzes, tests, lab sheets, and one written report. The grade distribution is as follows:

Quizzes: 10%

Test 1: 15%

Test 2: 15%

Test 3: 15%

Final Exam: 25%

Lab work: 20%

**Late Work:**

50% of the assignment’s grade will be deducted for every day that the assignment is late. Additionally, teachers may modify the expectations for the assignment if being completed late (such as requiring terms to be written twice).

**Grading Scale:**

A 90-100%

B 80-89%

C 70-79%

D 60-69%

F Below 59%

**Attendance Policy:**

Students are expected to follow the attendance policy of Calvary Baptist Academy.

**Study tips and recommended reading:**

* The best way to stay on course in the class is by reading the chapter beforecoming to class. Your weekly quizzes will be open-book on Monday of the week the chapters will be taught. This means that you should read the material before Monday of that week. This will make you familiar with the concepts ahead of time, that way, in class, you are able to follow along without getting too confused. This also allows you to identify areas of confusion for you, so you know to pay extra close attention to those sections when they are covered.
* Read through your notes each evening to prepare for the next day’s daily quiz. This will keep you in the material throughout the unit rather than cramming the night before a test.
* Khan Academy (<https://www.khanacademy.org>) is a free resource that provides review videos for nearly every subject covered in this course. If you’re having trouble understanding a particular topic, try learning it from here instead!
* Amoeba Sisters (<https://www.youtube.com/user/AmoebaSisters>) is a YouTube Channel that has several videos on basic biological concepts. These videos can be really helpful when reviewing and preparing for tests.

**Course Schedule:**

**UNIT 1**

**Week 1** Aug. 16-17

**Chapter 1. Introduction: Biology Today**

**Week 2** Aug. 20-24

**Chapter 2. Essential Chemistry for Biology**

**Chapter 3. The Molecules of Life**

**Week 3** Aug. 27-31

**Chapter 3. The Molecules of Life**

**Chapter 4. Tour of the Cell**

**Week 4** Sept. 3-7

**Chapter 5. The Working Cell**

**Chapter 6. Cellular Respiration: Obtaining Energy from Food**

**Week 5** Sept. 10-14

**Chapter 6. Cellular Respiration: Obtaining Energy from Food**

**Week 6** Sept. 17-21

**Chapter 7. Photosynthesis: Using Light to Make Food**

**Sept. 21 Test 1**

 **UNIT 2**

**Week 7** Sept. 24-28

**Chapter 8. Cellular Reproduction: Cells from Cells**

**Week 8** Oct. 1-5

**Chapter 9. Patterns of Inheritance**

**Chapter 10. The Structure and Function of DNA**

**Week 9** Oct. 8-12

**Chapter 10. The Structure and Function of DNA**

**Week 10** Oct. 15-19

**Chapter 11. How Genes are Controlled**

**Oct. 17 Test 2**

**UNIT 3**

**Week 11** Oct. 22-26

**Chapter 12. DNA Technology**

**Week 12** Oct. 29-Nov. 2

**Chapter 13. How Populations Evolve**

**Week 13** Nov. 5-9

**Chapter 14. How Biological Diversity Evolves**

**Week 14** Nov. 12-16

**Chapter 15. The Evolution of Microbial Life**

Nov. 19-23 No School - Fall Break

**Week 15** Nov. 26-30

**Chapter 16. The Evolution of Plants and Fungi**

**Chapter 17. The Evolution of Animals**

**Nov. 30 Test 3**

**UNIT 4**

**Week 16** Dec. 3-7

**Chapter 18. An Introduction to Ecology and the Biosphere**

**Week 17** Dec. 10-14

**Chapter 19. Population Ecology**

**Chapter 20. Communities and Ecosystems**

**December 14 Final Exam**