



AMERICAN UNIVERSITY OF BEIRUT
Faculty of Arts & Sciences
Department of Biology

Course Number and Title: Biology 209- Biology- Concepts and Connections
Semester: Spring 2010-2011
Time: 9:30-10:45 Phys 327
Instructor: Dr. Hind Rizkallah
Email: hr00@aub.edu.lb
Office: Room 106A, Biology bldg.
Office Hours: M,F 11:00-12:00
Textbook: Campbell,Reece,Taylor,Simon & Dickey.Biology: Concepts & Connections, 6th edition.Pearson

Moodle: This course is available on MOODLE

COURSE DESCRIPTION

A course that covers the basic aspects of cell structure and function. An overview of heredity, diversity and evolution. Interrelationships of living things and a brief coverage of organs and systems in animals.

Course learning outcomes:

By the end of the course the student should be able to:

- 1. Describe life's hierarchy of organization, cell structure, heredity, evolution and diversity of life. Assessed through multiple choice tests and analysis questions**
- 2. Analyze the relationship between structure and function at the cellular as well as organismal level. Assessed through multiple choice tests and analysis questions.**
- 3. Properly use literature and biological data bases to communicate the information effectively. Assessed through presentations to related topics.**

COURSE CONTENTS

Chapter 1: Biology: Exploring Life.

Describe life's hierarchy of organization; living organisms' interactions with their environment; the structural and functional aspects of cells

Chapter 3: The Molecules of Cells.

Define& describe the the different nutrients;nucleic acids; their function and importance.

Chapter 4: A Tour of the Cell.

Describing the different structures in the cell their function in different cell processes.

Chapter 5: The Working Cell.

Describe the cell membrane structure and the different methods of material transfer across it. Role of enzymes.

Chapter 6: How Cells Harvest Chemical Energy.
Explain energy production and consumption in the cells.

Chapter 8: The Cellular Basis of Reproduction and Inheritance.
Connections between cell division and reproduction.

Chapter 9: Patterns of Inheritance.
Describing heredity and how traits are carried in cells.

Chapter 10: Molecular Biology of the Gene.
Comparing DNA and RNA; their functions and structure, while focusing on the effects of different mutations.

MIDTERM

Chapter 13: How Populations Evolve.
Exploring the theory of evolution.

Chapter 14: The Origin of Species.
Explain how geographical processes can fragment populations and lead to speciation

Chapter 20: Unifying Concepts of Animal Structure and Function.
Describe body processes and hierarchal structure.

Chapter 22: Gas Exchange.
Describe the process of respiration and transport of oxygen in the body.

Chapter 23: Circulation.
Describe the heart, its function and the mechanism of blood circulation relating the structure of blood vessels to their function.

Chapter 25: Control of Body Temperature and Water Balance.
Describe the role of the kidney on heat regulation.

Chapter 28: Nervous system.
Describe the nervous system, reflexes, and explain the effect of drugs on chemical synapses.

Final Exam

GRADING

MidTerm (April 26)	40 %
Final	45 %

Presentation	10%
Attendance	5 %

COURSE POLICY:

In order to do well in this course, it is imperative that you keep up with reading the chapters and attend lectures.

1. Class attendance

Class attendance is highly recommended. Attendance will be taken during the lecture. Absence of a student does not excuse him/her from the responsibility for the work done, or for any announcements made during his/her absence. Students who miss classes excessively are subject to be dropped from the course (**AUB Catalogue, 2010-2011, page 133**).

2. Class rules

The first rule is **TURN OFF YOUR MOBILE PHONES** before getting into the classroom. Second, I expect students to attend classes and be **PUNCTUAL** (Punctuality is a measure of civility). I expect students to be respectful.

3. Exam rules and regulations

You are required to take all the exams on the scheduled day and time. **Failure to sit for an exam will result in a grade of '0' (ZERO) for that exam. NO MAKE UP EXAMS** will be given. An alternative arrangement could be made; however, the nature for such arrangement is at the discretion of the instructor. A written explanation/reason must be provided within **one week** of the scheduled exam to allow for such an arrangement.

Mobile phones should be turned off during the exam. They are not to be seen in front of you (you can keep them in your bags or pockets) and cannot be used as calculators.

4. Academic integrity

I will not tolerate any kind of dishonesty during exams (honesty in your academic work will develop into professional integrity). For more information on the Student Code of Conduct refer to the following AUB website (<http://pnp.aub.edu.lb/university/handbook/158010044.html>).