



BIO 013: General Biology I

Term: 2020 Winter Session
Instructor: Staff
Language of Instruction: English
Classroom: TBA
Office Hours: TBA
Class Sessions Per Week: 6
Total Weeks: 4
Total Class Sessions: 25
Class Session Length (minutes): 145
Credit Hours: 5
Total Laboratory Sessions: 10

Course Description:

Through this course, students will build a fundamental knowledge of biology, including biochemistry, cell structure, function and membranes, metabolism, respiration and photosynthesis, heredity, development and evolution of life. Students' investigative skills for research basis will be developed. Includes laboratory.

Course Materials:

Required textbook: Campbell Biology, Reece, 10th Edition

Course Format and Requirements:

Lectures:

Students should do the assigned readings before coming to the lectures. During some of the lectures there will be in-class discussions, with two or three students discussing the problem together for a few minutes before discussing the problem as a whole class. An active participation in lecture will help a student to better understand the material and prepare for exams.

Labs:



The goal of the labs is to provide a hands-on experience with biological material and to enhance abilities in scientific methodology, critical thinking, and communicating about biology. Attendance is mandatory. No make-up labs will be provided.

Grading Scale:

A+: 98%-100%

A: 93%-97%

A-: 90%-92%

B+: 88%-89%

B: 83%-87%

B-: 80%-82%

C+: 78%-79%

C: 73%-77%

C-: 70%-72%

D+: 68%-69%

D: 63%-67%

D-: 60%-62%

F: Below 60%

Course Assignments:

Homework Assignment

Homework assignment is a individual work. It will cover the key points and concepts in each lectures. The answers of Homework question will be posted in next class by instructor. As a result, each students shall submit his/her individual answer before the beginning of next Class.

Quizzes

The quizzes will be multiple choices. There will be 5 quizzes among the whole semester. The quizzes will be based on lecture material.

No make-up quizzes will be given.

Exams (Two Midterm Exams and a Final Exam):

Exams are a combination of multiple choice, short answer questions and true/false questions. Only the final exam is cumulative. Students are responsible for all notes in posted lecture



presentations and material discussed in lecture. The textbook is a critically important supplement to your learning and will enhance understanding of material presented in lecture. There are no makeup exams or re-scheduling of exams.

Lab Assignments:

Lab grading depends on in-class worksheets, participation, lab reports and the lab final exam or presentation. Specific due dates for projects and more detailed lab policies will be given in lab. Attendance at labs is mandatory. Students missing 3 or more labs, whether excused or unexcused, will receive an F grade for the course.

Course Assessment:

Homework Assignment	10%
5 Quizzes	15%
Labs	15%
Midterm Exams 1	15%
Midterm Exams 2	15%
Final Exam	30%
Total	100%

Course Schedule:

Week	Topics	Activities
1.	Go through syllabus Course overview Introduction to Biochemistry: A Chemical Connection to Biology Water and life Carbon and The molecular Diversity of Life Structure and Molecular of Large Biological Molecules	Homework Assignment Quiz 1 Quiz 2



	Basic Introduction to Cells Cell Structure and Functions	
2.	Membrane Structure and functions Metabolism Cellular Respiration Photosynthesis Cellular Signaling	Homework Assignment Quiz 3 Midterm 1
3.	Cell cycle and division Meiosis and Sexual Life Cycles Genetics: Mendel's laws Genetics: Beyond Mendelian Basics of Inheritance	Homework Assignment Quiz 4 Midterm 2
4.	Gene Expression and Regulation Viruses, Genomes and Their Evolution Evolution: A Darwinian View The Evolution of Populations The Origin of Species Course Summary	Homework Assignment Quiz 5 Final exam



Lab Schedule:

Lab 1: Laboratory Safety; Microscope and other equipment; Scientific Investigation

Lab 2: Discovering molecules

Lab 3: Discovering Cells; Bacteria; Protists

Lab 4: Cellular Respiration;

Lab 5: Photosynthesis

Lab 6: Cell cycle and division

Lab 7: Meiosis

Lab 8: Protein synthesis

Lab 9: Enzymes

Lab 10: Membranes & Spectrophotometry

Lab Final Presentation

Academic Integrity:

Students are encouraged to study together, and to discuss lecture topics with one another, but all other work should be completed independently.

Students are expected to adhere to the standards of academic honesty and integrity that are described in the Shanghai Normal University's *Academic Conduct Code*. Any work suspected of violating the standards of the *Academic Conduct Code* will be reported to the Dean's Office. Penalties for violating the *Academic Conduct Code* may include dismissal from the program. All students have an individual responsibility to know and understand the provisions of the *Academic Conduct Code*.

Special Needs or Assistance:

Please contact the Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material. Our goal is to help you learn, not to penalize you for issues which mask your learning.