

BIO 203: General Biology II (with lab)

General Information:

Term: 2021 Summer Session	
Instructor: Staff	
Language of Instruction: English	
Classroom: TBA	
Office Hours: TBA	
Class Sessions Per Week: 5	Lab Sessions Per week: 2
Total Weeks: 5	Total Weeks: 5
Total Class Sessions: 25	Total Laboratory Sessions: 10
Class Session Length (minutes): 145	Lab Session Length (minutes): 145
Credit Hours: 5	

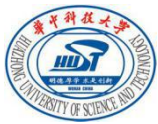
Course Description:

This course, as a continuation of General Biology 1 (with labs), explores the evolution and biodiversity of representative organisms in the plant and animal kingdoms. Beginning with a review and continuation on genetics, the studies of plants will investigate diversity, structure, and the physiology of absorption, transport, and photosynthesis. Students will examine the structure and life cycles of invertebrate and vertebrate animals. Students will also learn how living organisms interact with the environment. Laboratory exercises will make use of observation, experimentation, microscopy, and dissections to provide practical demonstrations of the topics covered in lecture.

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.

Attendance

Attendance is mandatory. More than three unexcused absences will result in an automatic reduction in your participation grade, for instance from A- to B+. Your active participation in the class is expected and constitutes part of your grade.

Course Materials:

Campbell Biology, Reece, 11th Edition

Course Assignments:

Quizzes

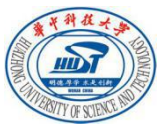
The quizzes will be multiple choices. There will be 6 quizzes among the whole semester and the lowest score will be dropped. The quizzes will be based on lecture material and should always be finished at the first 10-15minutes of the class. There are no make-up of quizzes allowed.

Exams:

Three midterm exams and a final exam are scheduled. 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:

6 Quizzes	10%
Labs	20%
Midterm Exams 1	15%
Midterm Exams 2	15%
Midterm Exams 3	15%
Final Exam	25%
Total	100%

Grading Scale (percentage):

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 Schedule:

Class 1:

Go through syllabus



Course overview

Review on BIO 011

Class 2:

Introduction and Basis of Inheritance

The Structure and Function of DNA

Class 3:

Quiz 1

Gene expression

DNA: Transcription and translation

Class 4:

DNA: Transcription and translation

DNA tools and their evolution

Class 5:

DNA Technology

How Genes are Controlled

Class 6:

Quiz 2

DNA mutations and Gene regulation

Class 7:

The Origin of Species

Review for midterm 1

Class 8:

Midterm Exam 1



Class 9:

The History of Life on Earth

Phylogeny and the Tree of Life Introduction

Class 10:

Quiz 3

Plant Diversity I:

Primitive Plants

Advanced Plants

Class 11:

Plant Anatomy

Plant Reproduction

Class 12:

Quiz 4

Plant Transport

Photosynthesis

Class 13:

Soil Plant Nutrition

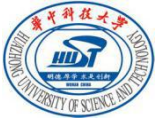
Review for midterm 2

Class 14:

Midterm Exam 2

Class 15:

An Overview of Animal Diversity



The Origins and Evolutions of Vertebrates

Class 16:

Animal tissues and organ systems

Class 17:

Quiz 5

Cardiovascular System and Circulation

Class 18:

Respiratory System, Hemoglobin and Gas Exchange

Class 19:

Excretory system

Review for midterm 3

Class 20:

Midterm Exam 3

Class 21:

Immunity system

Endocrine System, hormones, and cascades

Class 22:

Neurons, synapses, and signaling

Class 23:

Quiz 6

Sensory & Motor Mechanisms



Class 24:

Animal Nutrition

Animal behavior

Class 25:

Animal development

Summary of this semester

Review for final

Final Exam (Cumulative): TBA

Lab Schedule:

Lab 1: Lab Policy, Lab Safety

Lab 2: Gene Expression 1

Lab 3: Gene Expression 2

Lab 4: Liverworts and Mosses (Bryophyta)

Lab 5: Fruit and seed

Lab 6: Photosynthesis

Lab 7: Animal Tissues

Lab 8: Animal Production

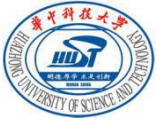
Lab 9: Respiration system

Lab 10: Excretory system

Lab 10: Neurons, synapses, and signaling

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 Huazhong University of Science & Technology'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.