BIO 215 Natural History of Organisms

Summer 2023

Course Credits: 4
Contact Hours: 55 hours
Instructor: TBA
Email:TBA

COURSE OBJECTIVES

The course BIO 215 Natural History of Organisms gives a further exploration of the basic concepts and fundamental principles in biology from historical perspective. It discusses a great variety of topics related to plants and animals. It introduces the natural history of biology, and the principles of animal form, function, and communities by presenting Canadian examples of flora and fauna. This course will also provide students with an in-dept insight into the issues associated with biology.

Upon Completion of this Course, students will be able to:

1. Understand biological concepts and major assumptions;
2. Understand the relation between theoretical understanding and the empirical approaches;
3. Recognize some animals and plants spices and know the functions of those different living things;
4. Learn from the animals and plants about how they solve major challenges;
5. Build a logical way of thinking and analyzing living things.

PREREQUISITES

N/A

GRADING

Grades will be determined by accumulating points, with 100 points being the maximum, as follows:

ITEM	POINTS
Assignments	40 Points
Midterm	25 Points
Final Exam	35 Points
Total	100 Points

Late submissions will be graded at the end of the course. Grades will be assigned according to the following rule:

A ≥ 90 > B ≥ 80 > C ≥ 70 > D ≥ 60 > F.

We reserve the right to make adjustments to the overall grading policy.

COURSE MATERIALS

Required Texts:

Rob Dunn, ***Never Home Alone: From Microbes to Millipedes, Camel Crickets, and Honeybees, the Natural History of Where We Live***, latest Edition, Basic Books, 2018.

Recommended (Optional) Texts or Other Materials:

Jane B. Reece, Lisa A. Urry, Michael L. Cain, et al., ***Campbell Biology***, latest Edition, Pearson Canada, 2016.

COURSE TOPICS

MODULE	TASKS
Module 1	**Topics:** Topic 1: Evolution, the Themes of Biology, and Scientific Inquiry Topic 2: The Chemical Context of Life Water and Life Topic 3: Carbon and the Molecular Diversity of Life Topic 4: Cell Topic 5: Metabolism **Assessments:** Assignment#1

Module 2	**Topics:** Topic 6: Life Cycles and Inheritance Topic 7: Gene Expression Topic 8: Viruses Topic 9: DNA Tools and Biotechnology Topic 10: Genomes and Their Evolution **Assessments:** Assignment#2
Module 3	**Topics:** Topic 11: Mechanisms of Evolution Topic 12: The Evolutionary History of Biological Diversity Topic 13: Plant Topic 14: Plant Form Topic 15: The Function of Plant **Assessments:** Midterm Assignment#3
Module 4	**Topics:** Topic 16: Plant Responses to Internal and External Signals Topic 17: Animal Topic 18: Basic Principles of Animal Form and Function Topic 19: Animal Reproduction Topic 20: Animal Development **Assessments:** Assignment#4
Module 5	**Topics:** Topic 21: Animal Behaviour Topic 22: Ecology and the Biosphere Topic 23: Population and Community Ecology Topic 24: Ecosystems and Restoration Ecology Topic 25: Conservation Biology and Global Change **Assessments:** Final Exam

ATTENDANCE

1) Class attendance is required. Missing classes without permission will lead to decrease in overall grade.

Missing less than two classes: no penalty.

Missing more than two classes: 7% will be taken off from the overall grade.

If the instructor reports a student's frequent missing of class to the Soochow

University Academic Administration Office, the student might get a written warning and might be prohibited from attending final exam.

2) Participants in this course are expected to arrive in class promptly and adequately prepared. The primary objective of this course is to critically engage with the readings and the subject matter. Therefore, course participants are expected to have completed the reading prior to class and prepare thoughtful reflections/commentaries to share with fellow colleagues.

LEARNING REQUIREMENTS

1) Late assignments are not acceptable and are subjected to grade deductions.
2) Assignments submitted in the wrong format will be counted as not submitted.
3) Failure to submit or fulfill any required course component results in failure of the class.
4) Make-up for midterm and final exams only with valid excuses, as defined by the University.
5) In order to earn a Certificate of Completion, participants must thoughtfully complete all assignments by stated deadlines and earn an average quiz score of 50% or greater.

TECHNOLOGY POLICY

The use of electronic devices in class is distracting, both for the user and for the rest of the class. Only non-programmable calculators can be used in the tests and exam. Any attempts to use cell phones and other electronic communication devices will be seemed as cheating. Laptops are discouraged, unless you use them for activities DIRECTLY related to the course (eg., note taking, reading course documents).

ACEDEMIC INTEGRITY POLICY

Soochow University highly values the academic integrity and aims to promote the academic fairness, honesty and responsibility. Any academic dishonesty behaviors and any attempts to cheats and plagiarism will be reported to the university administration office. A written warning and the relevant penalties will be imposed. The record might be shown on the official university transcript.

DISABILITY ACCOMMODATION

Soochow University is committed to maintaining a barrier-free environment so that students with disabilities can fully access programs, courses, services, and activities at Soochow University. Students with disabilities who require accommodations for access to and/or participation in this course are welcome.

Note:

Please contact the University 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.