DEPARTMENT OF BIOLOGY
MEDGAR EVERS COLLEGE of the CITY UNIVERSITY OF NEW YORK

SYLLABUS
BIO 202 *** GENERAL BIOLOGY I I

TEXTBOOKS:

1. Lecture Textbook: Campbell, N. A., and J. B. Reece. 2005. Biology, 7th ed., Benjamin Cummings
2. Lab textbook: Morgan, J. G. and M.E.B. Carter. 2002. Investigating Biology (5th edition). Benjamin Cummings.

COURSE DESCRIPTION:

This organismal biology and ecology is the second part of the two-semester general biology course for science majors. It will cover introduction to virus; diversities in bacteria, protists, plants and animals; selected forms and functions in flowering plants and in humans; animal behavior; organisms and their environments. The laboratory component of this course will familiarize students with diversities in organisms, their forms and functions by demonstrations and hands-on on experiments.

COURSE GOALS/ OBJECTIVES:

The Goals of this course:

To provide students with a basic foundation of biology so that they can proceed to a higher level of biological inquiry. Expose students with challenging learning experiences which explore varied responses to the human condition, develop the skills to facilitate analytical inquiry, promote global awareness, encourage social consciousness, foster creativity, analytical and problem solving skills that are essential for professional competencies in the student's chosen career.

The Objectives of this course are:

A. Understand and use of scientific method in observation and analysis of living organisms and their environment.
B. Develop an appreciation of diversities in plants and animals, their adaptations and usefulness.
C. Use of classification skills in organizing and sequencing the biological information.
D. Develop skills to describe, analyze, compare, contrast and relate biological forms and functions and explain meaningful arrangements of biological information.
E. Develop skills in relating the biological theory to real life situation, recognizing human activities that affect the natural environment.

EXPECTED OUTCOMES:

At the completion of this course, students will be able to identify, understand and appreciate diversities in organisms and their usefulness, compare and contrast different biological processes and their interrelationships, the interaction between organisms and their environments. They should have sufficient background preparation for upper level courses, such as Zoology, Botany, Microbiology, Endocrinology, Chordate morphology, Neurobiology, Developmental Biology and Ecology.

METHODOLOGY:

Instruction methods will include lecture, lab experiments and observation, audiovisual material, computer assignments, group assignments, quizzes and major exams. Field trips may also be included.

COURSE REQUIREMENTS:

1. Regular and punctual attendance in lectures and labs.
2. Cheating and/or plagiarism will result in grade of "F" (see college policy).
3. Maintaining class discipline
4. Usually no make-up tests will be available
5. Late submission of assignments /term papers is unacceptable or may lead to deduction of points.
6. Wearing a lab coat is required during lab sessions
7. No food, drink and phone conversation during class/lab/exam sessions
8. Points may be deducted for delayed submission of exam paper/scantrons on completion of exam.
9. Lab report will not be graded for the lab not attended
10. Consecutive absence of more than twice the class meets in a week will result in grade of "F".

COURSE EVALUATION:

Lecture:	Departmental Mid-term	25%
	Departmental Final	25%
	Quizzes, Assignments etc.	50%
	Total	100%
Lab:	Biweekly lab quiz	33.3%
	Final lab exam	33.3%
	Weekly lab report	33.3%
	Total	100%

Final Lecture score:	Total lecture score/100X60
Final lab score:	Total lab score/100X40
Final Grade :	Final Lecture score + Final Lab. score

Grading Scale: 97-100 = A+; 93-96.9 = A; 90-92.9 = A-; 87.1-89.9 = B+; 83-87 = B; 80-82.9 = B-; 77.1-79.9 = C+; 73-77 = C; 67.1-69.9 = D+; 63-67 = D; 60-62.9 = D-; 00-59.0 = F.

A grade of "D" is not acceptable toward a degree at Medgar Evers College.

ADDITIONAL READINGS:

Raven P.H. and Johnson, G.B. 2002. Biology (Sixth ed.), WCB/McGraw-Hill Company, New York.

Gould, J.L. and Keton, W. T. 1996. Biological Science (sixth edition), W.W. Norton & Company. New York.

Mader, S.S. 1998. Biology (sixth edition) WCB/McGraw-Hill

BIO 202 **LECTURE TOPICS AND ASSIGNMENTS**

Week 1. Viruses: Ch. 18 and Prokaryotes: Ch 27
Structural features of a typical bacteriophage, a plant virus and an animal virus
Multiplication of T4 bacteriophage & HIV virus, Prions & viroids; Importance of Virus.
Structural features of a typical bacterium; Bacterial Diversity, Adaptation & Importance.

Week 2. Protists: Ch 28
Diversity among protests and their importance.
Assignment 1: Virus, bacteria and protests (due same day next week)

Week 3. Diversities among plants: Ch 29, 30 and Fungi: 31
General characteristics and importance of plant groups- Bryophytes, Pteridophytes, Gymnosperms, Angiosperms (flowering plants).
Structural features of a typical fungus; Fungal diversity and their importance.

Weeks 4 & 5 .Animal Diversity: Ch 33, 34
General characteristics of major animal groups.
Assignment 2: Diversities in plant, Fungi and animals (due same day next week)

Week 6. A comparative overview of Transport systems between flowering plants and humans. Ch. 36, 42

Week 7. A comparative overview of Action of hormones between flowering plants and humans. Ch. 39,45

MID TERM EXAM (topics 1-6)

Week 8. A comparative overview of Mode of nutrition between flowering plants and humans. Ch. 37, 41

Weeks 9 & 10 A comparative overview of Reproduction and development between flowering plants and humans. Ch. 38, 46
Assignment 3: Comparative studies between plant and animal systems (topics 7-10)

Week 11. How immune system works in humans, Ch. 43

Week 12. Human Nervous systems and their functions. Ch. 48

Week 13. Animal behavior Ch. 51
Assignment 4: topics 11-13 (due same day next week)

Week 14. Community interactions, Ch. 53

Week 14. Ecosystems and biogeochemical cycles, Ch. 54

Week 15. Human impact on the environment. Ch. 55
Assignment 5: Ecology (due final exam day)

BIOL 202 **LABORATORY SESSIONS AND TOPICS**

LAB REQUIREMENTS:
For your own safety and protection, lab coat must be worn in the lab. Each lab session has an assigned reading in the lab manual. Lab report due any time before start of next lab session. Attendance is required. **No make-up lab and lab test are available.**

LAB TEXTBOOK:
Morgan, J. G. and M.E.B. Carter. 2002. Investigating Biology (5th edition). Benjamin Cummings.

LAB EVALUATION: **(Lecture 60%; Lab 40%)**

Biweekly lab quiz	33.3%
Final lab exam	33.3%
Weekly lab report	33.3%
Total	100%

Lab Grade: Total lab score/100X40

LABORATORY SESSIONS:

Lab. 1. Bacteria as an experimental organism

Lab. 2. Study of Diversity among Protists and Fungi

Lab. 3. Investigating Plant diversities 1: Bryophytes and seedless vascular plants

Lab. 4. Investigating Plant diversities II: seed plants

Lab. 5. Investigating anatomy of root, stem and leaf

Lab. 6 Study of plant reproduction, germination and growth

Lab. 7 Animal diversity I

Lab. 8 Animal diversity II

Lab. 9 Vertebrate anatomy I: Investigating digestive and gas exchange system

Lab. 10 Vertebrate anatomy II: Study of excretory, reproductive systems and nervous system

Lab. 11 Vertebrate anatomy III: Study of circulatory and respiratory system

Lab. 12 Study of animal behavior

Lab. 13 Pond ecosystem

Lab. 14. Review

Lab 15. Final Lab exam