NATURAL SCIENCES DEPARTMENT
HOSTOS COMMUNITY COLLEGE
of THE CITY UNIVERSITY OF NEW YORK
SPRING 2012

SYLLABUS FOR *ORGANISMIC BIOLOGY - BIO 130 Section 43211 Code 1211*
4 credits. 3-hr. lecture/3-hr. lab
Pre/corequisites: *BIO 110*

COURSE DESCRIPTION:

Lecture topics include the theory of evolution by natural selection, the evolution and diversity of organisms and their classification into the five kingdoms. Students will learn the main morphological features of each group as well as animal digestion, endocrine system, circulation, immunity, nervous system I and basic concepts of ecology. The laboratory illustrates the concepts discussed in the lecture. This course is for non-science major students.

TEXTBOOK: **What is Life? A Guide to Biology with Physiology**
http://www.whfreeman.com/Catalog/product/whatislifeguidetobiologyandprep-u-secondedition-phelan
by Jay Phelan
First Printing
ISBN-13: 978-1-4292-4666-8; @ 2011 by W.H. Freeman and Companyl

OBJECTIVES

- Learn how to answer a wide range of biological questions
- Understand evolution and its relationship with biological diversity
- Discuss limitations for some methodologies. (technical, financial, and ethical)
- Strengthen brainstorming, critiquing, writing, and oral communication skills
- Analyze data obtained in the lab experiments and by reading primary literature.
- Learn to discuss what you read and what you know (Evolution vs. Intelligent Design)
- See how basic research can lead to unexpected applications.

SUBJECT AREAS	**CHAPTERS**	**PAGES**
1. **EVOLUTION AND NATURAL SELECTION**		
Evolution is an ongoing process	8	284
Darwin journeyed to a new idea	8	287
Four mechanisms can give rise to evolution	8	293
Natural Selection	8	304
Evidence for Evolution	8	314
2. THE ORIGIN AND DIVERSIFICATION OF LIFE ON EARTH		
Origin of Life	10	370
What Are Species	10	374
Evolutionary Trees	10	383
Marcoevolution	10	390
Overview of Diversity	10	396
Microbes Are in All Domains, Bacteria, Archaea, and Viruses	13	484

B. LABORATORY

Lab No.	Topic
1.	That Mystery of Mysteries: Understanding Evolution
2.	Making Sense of Diversity: Understanding Classification. Viruses, Bacteria, Protista and Fungi.
3	Plants without Seeds: Mosses and Ferns
4.	Plant with Seeds: Gymnosperms and Angiosperms
5.	Animal Kingdom Part I: Simple Animals
6.	Animal Kingdom Part II
7.	Dissection of the Fetal Pig: Circulatory System- Blood
8.	Gas Exchange
9.	Digestive System
10.	Endocrine System
11	Nervous System
12.	The Senses
13	Ecology
14	Field trip: Van Cortland Park or AMNH
15	Final Exam- Practicum

LABORATORY MANUAL: **Exploring Biology in the Laboratory**
By Murray P. Pendarvis
(First Edition) ISBN -13: 978-0-89582-799-9
Morton Publishing Company

Grade Policy: The final grade is determined as follows: lecture 75% Laboratory 25%

1. The Final Lecture grade will be based on

4-5 Exams (including the final exam)	60%
Assignments	10%
Participation	5% (suggested)

1. The Final Lab grade will be determined by

8-10 Lab Reports (each report has a writing component)	10%
Exams (Practical Midterm and Final); Quizzes	10%

Laboratory Participation 5%

No student under any circumstances will be given a passing grade in this Biology course without taking and passing the laboratory. Four unjustified absences to lab are equivalent to an F.

Policy Grade: The college uses the following grades:

A,A^{-} for excellent work

B^{+}, B, for good work

B^{-} C, for fair work

D, for poor work

F, for failure

I, for incomplete

WU, for unfinished incomplete, equivalent to F

W, for withdrawn

The grade of Incomplete (I) is given in regular courses upon request of the student for personal emergencies that are verifiable. The faculty member has the responsibility to provide Inc grade only to those students **who are passing the course**. The student has the responsibility to take the initiative in completing the work, and is expected to make up the incomplete during the first semester in residence after receiving the grade of Incomplete. If the student does not make up the incomplete during the following semester after receiving it**, an F grade may be given by the faculty member without further consultation with the student.**

If after the end of the first semester the Inc remains on the record it will be designated as an F and will be computed in the student's GPA.

A	93-100
A^{-}	90-92
B^{+}	87-89
B	83-86
B^{-}	80-82
C^{+}	77-79
C	70-76
D	60-69
F	Failure

There is no R grade in this course.

Lecture and Lab Participation:

Your participation in class is an important part of the final grade. This grade is based primarily on your participation in class discussions, in team projects and your attendance. For each class you miss, you will lose participation points. If you miss 25% or more of the term, you will be failed.

Academic policies:

Hostos Community College has an evaluation system based o the honesty and integrity of the academic work an identified student or students. Faculty, students and staff have the responsibility to uphold the standards of the community and to take action when others violate them. Faculty members have an obligation to educate students to the standards of academic integrity, and to report violations of these standards to the appropriate authorities of the college. If a community member is proved with academic dishonesty, the college will impose sanctions. The three most common forms of academic dishonesty are cheating, plagiarism, and bribery. It must

be understood that any student who knowingly aids in plagiarism or other cheating, e.g., allowing another student to copy a paper or examination question, is as guilty as the cheating student

Cheating:

In the collegiate setting, cheating is defined as the purposeful misrepresentation of another's work as one's own. Faculty and students alike are responsible for upholding the integrity of this institution by not participating either directly or indirectly in act of cheating and by discouraging others from doing so.

Plagiarism:

Plagiarism is a form of cheating which occurs when persons, even if unintentionally, fail to acknowledge appropriately the sources for the ideas, language, concepts, inventions, etc. referred to in their own work. Thus, any attempt to claim another's intellectual or artistic work as one's own constitutes an act of plagiarism.

Bribery:

In the collegiate setting, bribery involves the offering, promising, or giving of items of value, such as money or gifts, to a person in a position of authority, such as a teacher, administrator, or staff member, so as to influence his/her judgment or conduct in favor of the student. The offering of sexual favors in exchange for a grade, test score, or other academic favor, shall be considered attempted bribery. The matter of sexual favors, either requested or offered, in exchange for a grade, test score or other academic favor, shall also be handled as per the Sexual Harassment procedures of the College.

Course schedule:

Readings must be completed for each class. Not all assigned texts will be discussed in class or covered in the class lectures.