

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

**SYLLABUS**  
**BIO 481\*\*\*HUMAN PHYSIOLOGY**

**Lecture Text:** Human Physiology: The Mechanisms of Body Function.  
By Vander, Sherman and Luciano. Ninth Edition, 2003.  
Publishers: McGraw-Hill

**Laboratory Text:** A Laboratory Manual will be provided for you.  
**INSTRUCTOR:** **Dr. Ebere U. Nduka,**           **OFFICE: C324A.**  
**OFFICE HOURS:** Mon. 4.00-5.00 p.m.           **Tel: 718 270 6211.**  
Wed. 4.00-5.00p.m.

**COURSE DESCRIPTION:**

Students desiring to enroll in this course must have successfully completed a 4-credit, 300 level Biology course with lab and CHM 303 or received special permission from the chairperson. This course focuses on an analysis of the human body's internal environment. Topics include the nature of biological control systems, and the properties of the major specialized cell types, which comprise these systems, and the functioning of the organs of the body and their coordination. The lab will explore by experimental techniques with living specimens the functioning of various cell-tissue-organ systems of particular physiological interest.

**GRADING:**

The student's final grade will be determined as follows.

LECTURE EXAMS:	60%
LAB. EXAMS	<u>40%</u>
	100%

The lecture will contain at least 3 exams , a final exam, quizzes and a term paper. The lab will contain a midterm, final and quizzes. Attendance is required in both lecture and lab. A dissection kit and lab coat are required for lab. **IT IS THE POLICY OF THE DEPARTMENT NOT TO OFFER MAKE-UP EXAMS OR QUIZZES.**

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<b>BIO 481</b>	<b>LECTURE TOPICS</b>	<b>CHAPTER</b>
<b>LECTURE#</b>		
1.	Introduction to Physiology. Homeostasis General Organization of the body. Chemical composition of the body Cell Structure	1.  2 3
2.	Movement of Molecules Across cell Membrane Control of Cells by Chemical Messengers	4 5
3.	Neuronal Signaling and The Structure of the Nervous System.	8
4.	Sensory Systems	7
5.	Muscle	9
6.	Control of Body Movement	10
7.	The Endocrine System	11
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8.	Circulation	12
9.	Respiration	13
10.	The Kidneys and regulation of Water and Inorganic Ions	14
11.	The Digestion and Absorption of Food	15
12.	Regulation of Organic Metabolism, growth, and Energy Balance.	16
13.	Reproduction	18
14	Defense Mechanisms of the Body	21

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**LABORATORY TOPICS**

**BIO 481.**

LABORATORY SESSION 1.

Introduction-----Exercise 1.

LABORATORY SESSION 2.

Electrical Properties of Transporting Epithelia-----Exercise 2.

LABORATORY SESSION 3.

Compound Action Potential-----Exercise 3.

LABORATORY SESSION 4.

Sensory Physiology and Human Reflexes-----Exercise 4.

LABORATORY SESSION 5.

Motor Nerves and Skeletal Muscle-----Exercise 5.

LABORATORY SESSION 6.

Human Reflexes-----

LABORATORY SESSION 7.

Regulation of Heart Rate-----Exercise 6.

LABORATORY SESSION 8.

EKG, Heart Rate and Blood Pressure-----Exercise 7.

**MID-TERM.**

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LABORATORY SESSION 10.

Microcirculation.-----Exercise

LABORATORY SESSION 11.

Human Respiration.-----Exercise 9.

LABORATORY SESSION 12.

Kidney Function

LABORATORY SESSION 13.

Endocrine Function

LABORATORY SESSION 14.

**REVIEW**

LABORATORY SESSION 15.

**FINAL EXAM.**

