Kingsborough Community College
The City University of New York
Department of Biological Sciences

SYLLABUS FOR BIO 1800

THE CUNY COMMON CORE: HUMAN BIOLOGY

Course description: FOR NON-SCIENCE MAJORS AND THOSE WHO PLAN TO TRANSFER TO SENIOR COLLEGES WITHIN CUNY. THIS COURSE WILL OFFER A ONE-SEMESTER OVERVIEW OF ANATOMY AND PHYSIOLOGY OF ALL ORGAN SYSTEMS OF THE HUMAN BODY. THE INTERRELATIONSHIPS BETWEEN ORGAN SYSTEMS WILL BE EMPHASIZED TO PROVIDE A HOLISTIC VIEW, PRACTICAL APPLICATIONS TO HEALTHCARE AND REINFORCEMENT OF HEALTH LITERACY SKILLS. THROUGH LECTURE AND DISCUSSION, THE PROCESSES OF THE HUMAN BODY WILL BE EXPLORED. FOR EACH TOPIC, INTERACTIVE COMPUTERIZED LAB EXPERIENCES INVOLVING APPLICATION OF THE PROCESS OF SCIENTIFIC INQUIRY WILL BE CONDUCTED. IN ADDITION, CURRENT ETHICAL ISSUES IN MEDICINE AND HEALTHCARE WILL BE STUDIED. THIS COURSE SATISFIES THE CUNY COMMON CORE REQUIREMENT FOR A COURSE IN LIFE AND PHYSICAL SCIENCES.
Credits/hours: 3 credits, 4 hours per week: 2 hours Lecture & 2 hours Lab

Prerequisites or co-requisites: None

Textbook:

Lecture and Lab: e-text

Essentials of Human Anatomy and Physiology
By: E. N. Marieb and S. M. Keller
ISBN: 9780135623930
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To purchase e-text, please go to Black Board: E-text tab, then to Pearson e-text. Choose a monthly option for $10.99 or a 4-month subscription for $43.99. Enter Promo code LEARN10 for a 10% discount.

Additional instructional materials: Online supplementary materials to accompany the required e-book

Learning Outcomes:

- Demonstrate knowledge of basic concepts of anatomy and physiology
- Identify and apply the fundamental concepts and methods of biology as they apply to the human body.
- Apply the scientific method to study of human anatomy and physiology, including hypothesis development, observation, experimentation, measurement, data analysis, and data presentation.
- Use the tools of biomedical research to carry out collaborative laboratory investigations.
- Gather, analyze, and interpret data and present it in an effective written laboratory report.
- Identify and apply biomedical research ethics and unbiased assessment in gathering and reporting scientific data.

Grading:

Lab reports/assignments	20%
Quizzes	30%
Exams	15%
Discussion posts	12%
Attendance check-in	3%
Final	20%
Total	100%

Accessibility Statement:

Access-Ability Services (AAS) serves as a liaison and resource to the KCC community regarding disability issues, promotes equal access to all KCC programs and activities, and makes every reasonable effort to provide appropriate accommodations and assistance to students with disabilities. Please contact this office if you require such accommodations and assistance. Your instructor will be glad to make the accommodations you need, but you must have documentation from the Access-Ability office for any accommodations.

Academic Integrity Policy:

Academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion. Examples of academic dishonesty include cheating, plagiarism, internet plagiarism, obtaining unfair advantage, and falsification of records. A full definition of each form of academic dishonesty, as well as procedures for imposition of sanctions for violations of the CUNY Policy on Academic Integrity, may be accessed at www.kingsborough.edu.

Civility Statement

As an institution of higher education, Kingsborough Community College and its faculty and staff are committed to its entire student body. As such, we strive to interact with each student equitably and professionally while providing an environment of mutual respect and civility. In the event a student has an allegation charge brought against him/her that is a breach of the Henderson Rules to Maintain Public Order or the Campus Code of Conduct, an immediate investigation will commence followed by a conciliation conference to determine the appropriate outcome within a thirty day period. The Judicial Affairs process at Kingsborough Community College is critical in providing an agenda for safety, yet simultaneously offering protection of the rights of students who may have been accused of being in violation of the Henderson Rules to Maintain Public Order and/or the Campus Code of Conduct. These rights have been afforded to each Kingsborough student under the bylaws that were established in 1969.

Equity Statement

In an ideal world, science would be objective. However, much of science is subjective and is historically built on a small subset of privileged voices. I acknowledge that much of scientific research and publications have been the work of white men. With that in mind, I have tried to select topics and activities that broaden the voice of science as well as consider and respect difference. However, although I have tried to address inequities in science, there may be both overt and covert biases in the materials you read during the course. Please contact me if you have any suggestions to improve the quality of the course materials. One of my teaching goals is to create a learning environment that supports a diversity of thoughts, perspectives, and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.). To help accomplish this:

- I will ask you to tell me the name and/or set of pronouns you would like me to use to address you.
- I want to be a resource for you. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to connect with me to talk about it.
- Like so many people, I am still in the process of learning about diverse perspectives and identities. I will make mistakes!

WEEK	LECTURE	LAB	Assignments and due dates
1 9/8- 9/10	**Chapter 1** The Human Body: Orientation - 1.2. Levels of Organization - 1.3 Maintaining Life Functions - 1.5 Homeostasis	**Chapter 1** The Human Body: Orientation - 1.2b Organ Systems: identification of major organs. - 1.4. Language of Anatomy: anatomical positions, surface anatomy, directional terms, body planes and cavities. Video: Rat Dissection – Identification of Major organs - Understanding Science and scientific methods - Math and measurements: metric system	Discussion Post: introduction Attendance check -in Quiz #1 Group Activity 9/10
2 9/11- 9/14	**Chapter 2** Basic Chemistry: - 2.1 Concepts of Matter and Energy - 2.2 Composition of Matter - 2.3 Molecules and Compounds - 2.4 Chemical Bonds and Chemical Reactions - 2.5 Biochemistry **Chapter 3** Cells and Tissues Part I Cells	**Chapter 2** Basic Chemistry: - Videos on Biochemistry - Activity on Got Lactose - Group Report on glucose data analysis **Chapter 3** Cells and Tissues - Passive transport: Diffusion and Osmosis Simulations	Discussion Post Attendance check -in Quiz #2 Group Activity 9/18
3 9/18- 9/23	**Chapter 7** Nervous System - 7.1 Organization of the nervous system - 7.2 Nervous tissue structure and function - Systems in Sync	**Chapter 7** Nervous System - 7.3 Central Nervous system: brain and spinal cord - 7.4 Peripheral nervous System Video: Sheep Brain Dissection – neuroanatomy : identification of major gyri, sulci and cortical areas - Neurophysiology: http://www.hhmi.org/biointeractive/neurophysiology-virtual-lab - Group Report on Neurophysiology	Discussion on injuries and disorders of the nervous system Attendance check -in Quiz #3 Group Activity 9/26
4 9/26- 10/1	**Chapter 9** Endocrine System - 9.1 The Endocrine System and Hormone Function - Systems in Sync	**Chapter 9** Endocrine System - 9.2 The Major Endocrine Organs - Type 1 vs type 2 diabetes - Group report on the Endocrine system	Discussion on Endocrine Disorders and Diseases Attendance check -in Quiz #4 Group Activity

			10/1
5 10/2- 10/8	**Chapter 3** Cells and Tissues Part II Body Tissues - 3.4 Epithelial Tissues - 3.5 Connective tissues **Chapter 4** The Skin and Body Membranes - 4.1 Classification of Body membranes - 4.2 Integumentary System - Systems in Sync	**Chapter 3** Cells and Tissues - Study of Epithelial Tissues - Study of Connective Tissues - Microscope **Chapter 4** The Skin and Body Membranes - Jaundice - Melanin - Skin color - Group report on skin color	Discussion on disorders of the integumentary system Attendance check -in Quiz #5 Group Activity Exam#1 10/8
6 10/10 - 10/15	**Chapter 5** Skeletal System - 5.1 Bones and overview - 5.5 Developmental aspects - Systems in Sync	**Chapter 5** Skeletal System - 5. 2 The axial skeleton: study of the skeleton - 5. 3 The appendicular skeleton: study of the skeleton - 5. 4 Joints: study of major types of articulations - Group report	Discussion on injuries and disorders of the skeletal system Attendance check -in Quiz #6 Group Activity 10/15
7 10/16 - 10/22	**Chapter 6** Muscular System - 6.1 Overview - 6.2 Microscopic anatomy - 6.3 Skeletal muscle activity - Systems in Sync	**Chapter 6** Muscular System - 6.4 Muscle movements - 6.5 Gross anatomy - Group report	Discussion on injuries and disorders of the muscular system Attendance check -in Quiz #7 Group Activity 10/22
8 10/23 - 10/29	**Chapter 10** Blood - 10.1 Composition and function - 10.2. Hemostasis	**Chapter 10** Blood - 10.3 Blood groups and transfusions - Group report	Discussion blood disorders Attendance check -in Quiz #8 Group Activity Exam #2

			10/29
9 10/30 - 11/5	**Chapter 11** Cardiovascular System Function of the cardiovascular system - 11.1 The heart - 11.2 Blood vessels - Systems in Sync	**Chapter 11** Cardiovascular System - Video: Sheep Heart Dissection - Virtual lab cardiology - Blood vessel anatomy - Group report	Discussion on cardiovascular disease Attendance check -in Quiz #9 Group Activity 11/5
10 11/6- 11/12	**Chapter 12** - Part I Lymphatic system - Part II Body Defenses - Systems in Sync	**Chapter 12** - Anatomy of the lymphatic system - Virtual lab on immunology - Group report	Discussion on disorders of the endocrine system Attendance check -in Quiz #10 Group Activity 11/12
11 11/13 - 11/19	**Chapter 13** Respiratory System - 13.1 Functional Anatomy - 13.2 Respiratory Physiology - 13.3 Respiratory Disorders - Systems in Sync	**Chapter 13** Respiratory System - 13.1 Functional Anatomy - 13.2 Respiratory Physiology - Group report	Discussion on respiratory disorders Attendance check -in Quiz #11 Group Activity 11/19
12 11/20 - 11/21	**Chapter 14** Digestive System - Part I Anatomy and Physiology - Part II Nutrition and Metabolism	**Chapter 14** Digestive System - Part I Anatomy and Physiology - Part II Nutrition and Metabolism - Biomolecules - Group report on biomolecules	Discussion on disorders Attendance check -in Quiz #12 Group Activity 11/21

13 11/27 - 12/3	**Chapter 15** Urinary System - 15.1 Kidneys - 15.2 Ureters, urinary bladder, and urethra - 15.3 Fluid, electrolyte and acid balance	**Chapter 15** Urinary System - Video: Sheep Kidney Dissection - GFR rate - Arterial blood gas/ph - Group report	Discussion on disorders/transplant Attendance check -in Quiz #13 Group Activity Exam #3 12/3
14 12/4-12/8	**Chapter 16** Reproductive systems - 16.2 Male reproductive function - 16.4 Female reproductive functions - 16.5 Mammary glands - 16.6 Pregnancy and embryonic development - Systems in Sync	**Chapter 16** Reproductive systems - 16.1 Male reproductive system anatomy: identification of the organs - 16.3 Female reproductive system anatomy: identification of the organs - Sex verification - Group report	Discussion on injuries and disorders of the nervous system Attendance check -in Quiz #14 Group Activity 12/8
			Final Exam 12/12