KINGSBOROUGH COMMUNITY COLLEGE
The City University of New York

CURRICULUM TRANSMITTAL COVER PAGE

Department: Biological Sciences **Date:** 10/16/17

Title Of Course Or Degree: BIO 1800, The Biology of the Human Body

Change(s) Initiated: (Please check)

- ☐ Closing of Degree
- ☐ Closing of Certificate
- ☐ New Certificate Proposal
- ☐ New Degree Proposal
- ☑ New Course
- ☐ New 82 Course
- ☐ Deletion of Course
- ☐ Change in Degree or Certificate Requirements
- ☐ Change in Degree Requirements (adding concentration)
- ☐ Change in Pre/Co-Requisite
- ☐ Change in Course Designation
- ☐ Change in Course Description
- ☐ Change in Course Title, Numbers Credit and/or Hour
- ☐ Change in Academic Policy
- ☐ Pathways Submission:
  - ☑ Life and Physical Science
  - ☐ Math and Quantitative Reasoning
  - ☐ A. World Cultures and Global Issues
  - ☐ B. U.S. Experience in its Diversity
  - ☐ C. Creative Expression
  - ☐ D. Individual and Society
  - ☐ E. Scientific World

☐ Other (please describe): _____

PLEASE ATTACH MATERIAL TO ILLUSTRATE AND EXPLAIN ALL CHANGES

DEPARTMENTAL ACTION

Action by Department and/or Departmental Committee, if required:

Date Approved: 10/10/17 Signature, Committee Chairperson: [signature]

I have reviewed the attached material/proposal

Signature, Department Chairperson: [signature]

ASSOCIATE IN APPLIED SCIENCES (A.A.S.) IN COORDINATED CARE AND COMMUNITY HEALTH

PROGRAM OVERVIEW

Kingsborough Community College proposes the development of a new associate's degree program that responds to growing industry demand for coordinated care workers. We posit that a program that combines Certified Clinical Medical Assistant (CCMA) training with community health coursework will appropriately respond to this immediate need and fully prepare students for the care worker role. Additionally, the degree creates new pathways for career advancement and continued education for incumbent and aspiring care workers, as follows:

- The CCMA sequence of the degree will help new students attain an entry-level position in allied healthcare as they work their way through school. Meanwhile, incumbent health care workers can earn college credit for the following credentials they have previously earned:
    - Certified Clinical Medical Assistant (CCMA)
    - EKG/ECG Technician
    - Phlebotomy Technician

- The community health and coordinated care sequences of the degree, meanwhile, provide the necessary experience and coursework for students to advance their education in more specialized skills. Courses in patient engagement, public health, the US healthcare system, and anatomy and physiology prepare students to communicate effectively with both patients and doctors. Students will learn how to explain health trends, diagnoses, prognoses, insurance fundamentals, follow-up care, and medication instructions to patients in terminology patients will understand. Additionally, students will learn how to read, analyze, interpret, and explain medical and health research data, an important skill for career advancement in public health and health administration.

- Upon earning an associate's degree, students will have the option to transfer their credits to a four-year school to pursue a Bachelors in fields that may enhance their career advancement, such as public health, health services administration, community health education, or health promotion management.

Work experience is considered of paramount importance for this program. We will offer flexible scheduling through online and hybrid courses to allow (and encourage) students to work while they are enrolled in school. As students earn credentials and gain more skills, we will simultaneously advise them to pursue opportunities for advancement in the field. By graduation, we expect working students will have significantly surpassed the earning potential and career opportunities of recent graduates with little to no experience.

KINGSBOROUGH COMMUNITY COLLEGE
THE CITY UNIVERSITY OF NEW YORK

NEW COURSE PROPOSAL FORM

1. **DEPARTMENT, COURSE NUMBER, AND TITLE (SPEAK TO ACADEMIC SCHEDULING FOR NEW COURSE NUMBER ASSIGNMENT):** Biological Sciences, Bio 1800, The Biology of the Human Body

2. **DOES THIS COURSE MEET A GENERAL EDUCATION/CUNY CORE CATEGORY?**
   - ✓ **Life and Physical Science**
   - ☐ **Math and Quantitative Reasoning**
   - ☐ **A. World Cultures and Global Issues**
   - ☐ **B. U.S. Experience in its Diversity**
   - ☐ **C. Creative Expression**
   - ☐ **D. Individual and Society**
   - ☐ **E. Scientific World**

   IF YES, COMPLETE AND SUBMIT WITH THIS PROPOSAL A CUNY COMMON CORE SUBMISSION FORM.

3. **DESCRIBE HOW THIS COURSE TRANSFERS (REQUIRED FOR A.S. DEGREE COURSE). IF A.A.S. DEGREE COURSE AND DOES NOT TRANSFER, JUSTIFY ROLE OF COURSE, E.G. DESCRIBE OTHER LEARNING OBJECTIVES MET:** THE COURSE WILL TRANSFER WITHIN CUNY, BUT WILL NOT TRANSFER AS LAB SCIENCE OUTSIDE OF CUNY.

4. **BULLETIN DESCRIPTION OF COURSE:**
   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.

5. **CREDITS AND HOURS* (PLEASE CHECK ONE APPROPRIATE BOX BELOW BASED ON CREDITS):**

1-credit:	☐ 1 hour lecture ☐ 2 hours lab/field/gym
2-credits:	☐ 2 hours lecture ☐ 1 hour lecture, 2 hours lab/field ☐ 4 hours lab/field
3-credits:	☐ 3 hours lecture ✓ 2 hours lecture, 2 hours lab/field ☐ 1 hour lecture, 4 hours lab/field ☐ 6 hours lab/field
4-credits:	☐ 4 hours lecture ☐ 3 hours lecture, 2 hours lab/field ☐ 2 hours lecture, 4 hours lab/field ☐ 1 hour lecture, 6 hours lab/field ☐ 8 hours lab/field

More than 4-credits: ☐ Number of credits: ____ (explain mix lecture/lab below)

___ Lecture ____Lab

Explanation:_____

***Hours are hours per week in a typical 12-week semester**

6. **NUMBER OF EQUATED CREDITS IN ITEM #5: N/A**

7. **COURSE PREREQUISITES AND COREQUISITES (IF NONE PLEASE INDICATE FOR EACH)**
   A. PREREQUISITE(S): NONE
   B. COREQUISITE(S): NONE
   C. PRE/COREQUISITE(S): NONE

8. **BRIEF RATIONALE TO JUSTIFY PROPOSED COURSE TO INCLUDE:**
   A. ENROLLMENT SUMMARY IF PREVIOUSLY OFFERED AS AN 82 (INCLUDE COMPLETE 4-DIGIT 82 COURSE NUMBER) NOT PREVIOUSLY OFFERED
   B. PROJECTED ENROLLMENT: 24 STUDENTS PER SECTION
   C. SUGGESTED CLASS LIMITS: 24 STUDENTS PER SECTION
   D. FREQUENCY COURSE IS LIKELY TO BE OFFERED: EVERY SEMESTER AND MODULES
   E. ROLE OF COURSE IN DEPARTMENT'S CURRICULUM AND COLLEGE'S MISSION: FULFILLS REQUIREMETN FOR A 3 CREDIT COURSE FOR THE CUNY LPS REQUIRED CORE

9. **LIST COURSE(S), IF ANY, TO BE WITHDRAWN WHEN COURSE IS ADOPTED (NOTE THIS IS NOT THE SAME AS DELETING A COURSE): none**

10. **IF COURSE IS AN INTERNSHIP, INDEPENDENT STUDY, OR THE LIKE, PROVIDE AN EXPLANATION AS TO HOW THE STUDENT WILL EARN THE CREDITS AWARDED. THE CREDITS AWARDED SHOULD BE CONSISTENT WITH STUDENT EFFORTS REQUIRED IN A TRADITIONAL CLASSROOM SETTING: COURSE IS NOT PART OF AN INTERNSHIP OR INDEPENDENT STUDY**

11. **PROPOSED TEXT BOOK(S) AND/OR OTHER REQUIRED INSTRUCTIONAL MATERIAL(S):**
    Lecture:
    Introduction to Anatomy and Physiology
    By: Susan Hall, Michelle A. Provost-Craig, William C. Rose
    ISBN: 978-1-61960-412-4
    Copyright: © 2014

    Lab:
    Preparing for A&P: Basic Science and Biology
    By: Michael Crandell
    ISBN: 978-1-63126-962-2
    Copyright: © 2018

12. REQUIRED COURSE FOR MAJOR OR AREA OF CONCENTRATION? <u>This course is one of the options for students to fulfill the Life and Physical Sciences Required Common Core</u>

IF YES, COURSE IS REQUIRED, SUBMIT A SEPARATE CURRICULUM TRANSMITTAL COVER PAGE INDICATING A "CHANGE IN DEGREE OR CERTIFICATE REQUIREMENTS" AS WELL AS A PROPOSAL THAT MUST INCLUDE A RATIONALE AND THE FOLLOWING ADDITIONAL PAGES: A "<u>CURRENT</u>" DEGREE WITH ALL PROPOSED DELETIONS (STRIKEOUTS) AND ADDITIONS (BOLDED TEXT) CLEARLY INDICATED, AND A "PROPOSED" DEGREE, WHICH DISPLAYS THE DEGREE AS IT WILL APPEAR IN THE CATALOG (FOR A COPY OF THE MOST UP-TO-DATE DEGREE/CERTIFICATE REQUIREMENTS CONTACT AMANDA KALIN, EXT. 4611).

NYSED GUIDELINES OF 45 CREDITS OF LIBERAL ARTS COURSE WORK FOR AN ASSOCIATE OF ARTS DEGREE (A.A.), 30 CREDITS FOR AND ASSOCIATE OF SCIENCE DEGREE (A.S.), AND 20 CREDITS FOR AN APPLIED ASSOCIATE OF SCIENCE DEGREE (A.A.S.) MUST BE ADHERED TO FOR ALL 60 CREDIT PROGRAMS.

13. IF OPEN ONLY TO SELECTED STUDENTS SPECIFY POPULATION: <u>Open to all students</u>

14. EXPLAIN WHAT STUDENTS WILL KNOW AND BE ABLE TO DO UPON COMPLETION OF COURSE:

- 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.

15. METHODS OF TEACHING –E.G. LECTURES, LABORATORIES, AND OTHER ASSIGNMENTS FOR STUDENTS, INCLUDING ANY OF THE FOLLOWING: DEMONSTRATIONS, GROUP WORK, WEBSITE OR E-MAIL INTERACTIONS AND/OR ASSIGNMENTS, PRACTICE IN APPLICATION OF SKILLS, ETC.: <u>THE COURSE WILL INVOLVE LECTURE, DISCUSSION, DATA COLLECTION THROUGH LABORATORY ACTIVITIES AND SIMULATIONS, GROUP WORK, WEBSITE ASSIGNMENTS AND THE SUBMISSION OF WRITTEN REPORTS.</u>

16. ASSIGNMENTS TO STUDENTS:

Lab reports/assignments	**20%**
Lab quizzes/practicals	**30%**
Lecture Exams	**15%**
Homework assignments	**15%**
Final	**20%**

17. DESCRIBE METHOD OF EVALUATING LEARNING SPECIFIED IN #15 - INCLUDE PERCENTAGE BREAKDOWN FOR GRADING. IF A <u>DEVELOPMENTAL COURSE</u> INCLUDE HOW THE NEXT LEVEL COURSE IS DETERMINED AS WELL AS NEXT LEVEL PLACEMENT. <u>EVALUATION WILL INVOLVE EXAMS, QUIZZES, HOMEWORK ASSIGNMENTS AND WRITTEN LAB REPORTS.</u>

18. **TOPICAL COURSE OUTLINE FOR THE 12 WEEK SEMESTER (WHICH SHOULD BE SPECIFIC REGARDING TOPICS COVERED, LEARNING ACTIVITIES, AND ASSIGNMENTS):** **SEE ATTACHED SYLLABUS**

19. **SELECTED BIBLIOGRAPHY AND SOURCE MATERIALS:** **SEE ATTACHED SYLLABUS**

Revised/Dec.2015/AK

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:

Introduction to Anatomy and Physiology
By: Susan Hall, Michelle A. Provost-Craig, William C. Rose
ISBN: 978-1-61960-412-4
Copyright: © 2014

Lab:

Preparing for A&P: Basic Science and Biology
By: Michael Crandell
ISBN: 978-1-63126-962-2
Copyright: © 2018

Additional instructional materials: Online supplementary materials to accompany the required textbooks will be used for homework reports and group lab reports

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%
Lab quizzes/practicals	30%
Lecture Exams	15%
Homework assignments	15%
Final	20%
Total	100%

*Homework assignments will be submitted online in the form of reports on a weekly basis

* Biomedical research topics will be discussed in the lecture on weekly basis. Students will discuss in groups and present their conclusion to the class

*Students will be presented with an ethical dilemma (on selected weeks – see weekly syllabus), discuss in groups and present their conclusion to the class

* Lab activities will consist of worksheets, online activities and group lab reports

BIO 1800 Course Outline

WEEK	LECTURE	LAB
1	Foundations of Human A &P (**chapter 1**) - Defining Anatomy and Physiology - Basic physiological processes: Levels of Organization; Organ system overview, homeostasis - How forces affect the body Cells and Tissues Overview (**chapter 2**) - Molecules of life - Cells - Tissues	Language of Anatomy: anatomical positions, surface anatomy, directional terms, body planes and cavities (**chapter 9** from Preparing for A&P: Basic Science and Biology) Organ Systems: identification of major organs(**chapter 9** from Preparing for A&P: Basic Science and Biology) Understanding Science and scientific methods: (**chapter 3 pp. 76-82** from Preparing for A&P: Basic Science and Biology) Math and measurements: metric system (**chapter 4** pp. 122-128 from Preparing for A&P: Basic Science and Biology) Chemistry: atoms, chemical bonds (**chapter 5** pp. 203-232 from Preparing for A&P: Basic Science and Biology)
2	Nervous System (**chapter 6**) - Organization of the nervous system - Nervous tissue and cells - Transmission of nerve impulses	Nervous System: (**chapter 10** pp. 495-499 from Preparing for A&P: Basic Science and Biology) - Study of Functional Anatomy of the central nervous system: brain and spinal cord - Functional anatomy of the peripheral nervous system: cranial and spinal nerves - Discussion on injuries and disorders of the nervous system -Lab assessment group report on chapter 6 : Learning terms and concepts & think critically questions - Neurophysiology: http://www.hhmi.org/biointeractive/neurophysiology-virtual-lab
3	Endocrine System (**chapter 8**) - Functions and control of the endocrine system	Endocrine system: (**chapter 10** pp. 500-505 from Preparing for A&P: Basic Science and Biology) - Identification of Major Endocrine organs - Discussion on Endocrine Disorders and diseases - Lab assessment group report on chapter 8 : Learning terms and concepts & think critically questions
4	Membranes and the Integumentary System (**chapter 3**) - Functions of the Integumentary system Cell Cycle (**chapter 2, pp. 60-63**) Epithelial and Connective Tissues (**chapter 2, pp. 64-71**) - Functional characteristics of cells - Functional characteristics of tissues	Cells and Tissues: (**chapter 8** pp. 386-403 from Preparing for A&P: Basic Science and Biology) - Study of Epithelial Tissues - Study of Connective Tissues - Microscope: http://virtuallabs.nmsu.edu/micro.ph - Cell cycle and cancer cells: http://www.mhhe.com/biosci/genbio/virtual_labs_2K8/labs/BL_03/index.html Membranes and Integumentary system: (**chapter 10** pp. 472-474 from Preparing for A&P: Basic Science and Biology)

		- Body membranes: identification of cells and tissues of membranes - Anatomy of the skin: identification of cells and tissues - Discussion on Injuries and disorders of the skin - Lab assessment group report on chapter 3 : Learning terms and concepts & think critically questions
5	Skeletal System (**chapter 4**) - Functions of the skeletal system - Bone as a living tissue	Skeletal System: (**chapter 10** pp. 474-478 from Preparing for A&P: Basic Science and Biology) - The axial skeleton: study of the skeleton - The appendicular skeleton: study of the skeleton - Joints: study of major types of articulations - Discussion on Common Injuries and Disorders of the skeletal system -Lab assessment group report on chapter 4 : Learning terms and concepts & think critically questions
6	Muscular System (**chapter 5**) - Muscle tissue categories and functions - Skeletal muscle actions	Muscular System: (**chapter 10** pp. 487-494 from Preparing for A&P: Basic Science and Biology) - The major skeletal muscles: identification of major muscles - Discussion on Common injuries and disorders of muscles - Lab assessment group report on chapter 5 : Learning terms and concepts & think critically questions
7	Blood (**chapter 10**) - Function and composition of blood	Blood: - Blood cells: identification of cell types - Blood types: study of blood types - Discussion on Blood disorders and Diseases - Blood Pressure : http://www.mhhe.com/biosci/genbio/virtual_labs_2K8/labs/BL_14/index.html - Lab assessment group report on chapter 10 : Learning terms and concepts & think critically questions -
8	Cardiovascular System (**chapter 11**) - Function of the cardiovascular system - Regulation of the heart	Cardiovascular system: (**chapter 10** pp. 513-518 from Preparing for A&P: Basic Science and Biology) - Heart anatomy: study of gross anatomy of the heart - Blood vessels and circulation: identification of blood vessels - Discussion on Heart disease - Cardiology: http://www.hhmi.org/biointeractive/cardiology-virtual-lab - Lab assessment group report on chapter 11 : Learning terms and concepts & think critically questions

9	Lymphatic system (**chapter 12**) - Nonspecific defenses - Specific Defenses - Students will select a topic and defend their position on a current medical or ethical dilemma: Vaccination (**p.449**)	Lymphatic system: (**chapter 10** pp. 519-523 from Preparing for A&P: Basic Science and Biology) - Organization of the lymphatic system - Discussion on Disorders and diseases of the immune system - Immunology : http://www.hhmi.org/biointeractive/immunology-virtual-lab - Lab assessment group report on chapter 12 : Learning terms and concepts & think critically questions -
10	Respiratory System (**chapter 9**) - Functions of the respiratory system - Respiration: mechanics and control	Respiratory System: (**chapter 10** pp. 506-512 from Preparing for A&P: Basic Science and Biology) - Anatomy of the respiratory system: identification of organs of the respiratory system - Discussion on Respiratory disorders and diseases - Lab assessment group report on chapter 9 : Learning terms and concepts & think critically questions - .
11	Digestive system and nutrition (**chapter 13**) - Nutrition - Physiology of the digestive system Urinary system (**chapter 14**) - Urine formation, storage and excretion - Students will select a topic and defend their position on a current medical or ethical dilemma: kidney transplant (**p.517**)	Digestive system and nutrition (**chapter 10** pp. 524-529 from Preparing for A&P: Basic Science and Biology) - Anatomy of the digestive system: identification of the organs - Discussion on Disorders and diseases of the digestive system - Digestion: lactose intolerance: enzymes/ph: http://www.mhhe.com/biosci/genbio/virtual_labs_2K8/labs/BL_02/index.html Urinary system (**chapter 10** pp. 530-535 from Preparing for A&P: Basic Science and Biology) - Anatomy of the kidney: gross anatomy - Discussion on Diseases and disorders of the urinary system
12	Male and female reproductive systems (**chapter 15**) - Reproduction and development of the human reproductive system - Male and female reproductive system physiology - Students will select a topic and defend their position on a current medical or ethical dilemma: egg freezing and cancer screening (**p.557 & 571**)	Male and female reproductive systems (**chapter 10** pp. 536-543 from Preparing for A&P: Basic Science and Biology) - Male reproductive system anatomy: identification of the organs - Female reproductive system anatomy: identification of the organs - Fertilization, pregnancy and birth - Discussion on Disorders and diseases of the reproductive system - Lab assessment group report on chapter 15 : Learning terms and concepts & think critically questions - .

Resources

Virtual Labs

Cardiology: http://www.hhmi.org/biointeractive/cardiology-virtual-lab

Immunology : http://www.hhmi.org/biointeractive/immunology-virtual-lab

Neurophysiology: http://www.hhmi.org/biointeractive/neurophysiology-virtual-lab

Microscope: http://virtuallabs.nmsu.edu/micro.php

Muscle stimulation: http://www.mhhe.com/biosci/genbio/virtual_labs_2K8/labs/BL_13/index.html

Blood Pressure : http://www.mhhe.com/biosci/genbio/virtual_labs_2K8/labs/BL_14/index.html

Digestion: lactose intolerance: enzymes/ph:
http://www.mhhe.com/biosci/genbio/virtual_labs_2K8/labs/BL_02/index.html

Cell cycle and cancer cells: http://www.mhhe.com/biosci/genbio/virtual_labs_2K8/labs/BL_03/index.html

Videos:

Integumentary

Skin color: http://www.hhmi.org/biointeractive/how-we-get-our-skin-color

TedED https://www.youtube.com/watch?v=_r4c2NT4naQ

Immune

HIV life cycle : http://www.hhmi.org/biointeractive/hiv-life-cycle

Reproductive

Chromosomes: http://www.hhmi.org/biointeractive/human-chromosomes#video-7b9676a4-5f24-4837-9aaf-9352eed43c1e

Animations: Learning Activities

Lab Activities: https://www.wisc-online.com/learn/natural-science/life-science

Anatomical terminology – body regions: https://www.wisc-online.com/learn/natural-science/life-science/ap15405/anatomical-terminology-body-regions

Anatomical terminology –relative position: https://www.wisc-online.com/learn/natural-science/life-science/ap15305/anatomical-terminology-relative-position

Human body – major cavities: https://www.wisc-online.com/learn/natural-science/life-science/ap15505/the-organization-of-the-human-body-body-cavit

Body Sections: https://www.wisc-online.com/learn/natural-science/life-science/ap15605/body-sections-and-divisions-of-the-abdominal

Construction of cell membrane: https://www.wisc-online.com/learn/natural-science/life-science/ap1101/construction-of-the-cell-membrane

Other Resources:

http://www.scienceprofonline.com/instructors-corner/instructors-corner-vapc.html

http://clinton.libguides.com/content.php?pid=225015&sid=1979835

https://www.crc.losrios.edu/areas/sme/biol/virtual_anatomy_lab

https://vlabs.ac.in/courses

CUNY Common Core
Course Submission Form

Instructions: All courses submitted for the Common Core must be liberal arts courses. Courses submitted to the Course Review Committee may be submitted for only one area of the Common Core and must be 3 credits. Colleges may submit courses to the Course Review Committee before or after they receive college approval. STEM waiver courses do not need to be approved by the Course Review Committee. This form should not be used for STEM waiver courses.

College	Kingsborough Community College
Course Prefix and Number (e.g., ANTH 101, if number not assigned, enter XXX)	Bio 1800
Course Title	HUMAN BIOLOGY
Department(s)	Biological Sciences
Discipline	Biology
Credits	3
Contact Hours	4
Pre-requisites (if none, enter N/A)	none
Co-requisites (if none, enter N/A)	none
Catalogue 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.
Special Features (e.g., linked courses)	none
Sample Syllabus	Syllabus must be included with submission, 5 pages max recommended Se e attached

Indicate the status of this course being nominated:

☐ current course ☐ revision of current course ☒ a new course being proposed

CUNY COMMON CORE Location

Please check below the area of the Common Core for which the course is being submitted. (Select only one.)

Required Core	Flexible Core
☐ English Composition ☐ Mathematical and Quantitative Reasoning ☒ Life and Physical Sciences	☐ World Cultures and Global Issues (A) ☐ US Experience in its Diversity (B) ☐ Creative Expression (C) ☐ Individual and Society (D) ☐ Scientific World (E)

Learning Outcomes **In the left column explain the course assignments and activities that will address the learning outcomes in the right column.**	
I. Required Core (12 credits)	
A. English Composition: Six credits A course in this area must meet all the learning outcomes in the right column. A student will:	
	• Read and listen critically and analytically, including identifying an argument's major assumptions and assertions and evaluating its supporting evidence.
	• Write clearly and coherently in varied, academic formats (such as formal essays, research papers, and reports) using standard English and appropriate technology to critique and improve one's own and others' texts.
	• Demonstrate research skills using appropriate technology, including gathering, evaluating, and synthesizing primary and secondary sources.
	• Support a thesis with well-reasoned arguments, and communicate persuasively across a variety of contexts, purposes, audiences, and media.
	• Formulate original ideas and relate them to the ideas of others by employing the conventions of ethical attribution and citation.
B. Mathematical and Quantitative Reasoning: Three credits A course in this area must meet all the learning outcomes in the right column. A student will:	
	• Interpret and draw appropriate inferences from quantitative representations, such as formulas, graphs, or tables.
	• Use algebraic, numerical, graphical, or statistical methods to draw accurate conclusions and solve mathematical problems.
	• Represent quantitative problems expressed in natural language in a suitable mathematical format.
	• Effectively communicate quantitative analysis or solutions to mathematical problems in written or oral form.
	• Evaluate solutions to problems for reasonableness using a variety of means, including informed estimation.
	• Apply mathematical methods to problems in other fields of study.

C. Life and Physical Sciences: Three credits A course in this area must meet all the learning outcomes in the right column. A student will:	
The basic physiologic concepts will be explored and applied to study normal organ function. Lecture exams and laboratory quizzes will be used to assess student performance.	• Identify and apply the fundamental concepts and methods of a life or physical science.
Specific lab activities will focus on application of scientific method to study of human anatomy and physiology Each lab will have an analytic component and quantitative reasoning coaching activities. Students will complete worksheets and online activities during lab	• Apply the scientific method to explore natural phenomena, including hypothesis development, observation, experimentation, measurement, data analysis, and data presentation.
After conducting independent scientific inquiry exercises, students will work in groups to review results obtained and compile group lab reports	• Use the tools of a scientific discipline to carry out collaborative laboratory investigations.
Students will conduct lab activities such as virtual labs and simulations. For such activities, students develop hypothesis, collect experimental data, develop a data graph and submit an online report.	• Gather, analyze, and interpret data and present it in an effective written laboratory or fieldwork report.
Group activities on current healthcare issues and ethical concerns in medicine and therapeutics will be conducted in both lab and lecture and conclusions will be presented to the class.	• Identify and apply research ethics and unbiased assessment in gathering and reporting scientific data.
II. Flexible Core (18 credits) Six three-credit liberal arts and sciences courses, with at least one course from each of the following five areas and no more than two courses in any discipline or interdisciplinary field.	
A. World Cultures and Global Issues	
A Flexible Core course must meet the three learning outcomes in the right column.	
	• Gather, interpret, and assess information from a variety of sources and points of view.
	• Evaluate evidence and arguments critically or analytically.
	• Produce well-reasoned written or oral arguments using evidence to support conclusions.
A course in this area (II.A) must meet at least three of the additional learning outcomes in the right column. A student will:	
	• Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring world cultures or global issues, including, but not limited to, anthropology, communications, cultural studies, economics, ethnic studies, foreign languages (building upon previous language acquisition), geography, history, political science, sociology, and world literature.
	• Analyze culture, globalization, or global cultural diversity, and describe an event or process from more than one point of view.
	• Analyze the historical development of one or more non-U.S. societies.
	• Analyze the significance of one or more major movements that have shaped the world's societies.
	• Analyze and discuss the role that race, ethnicity, class, gender, language, sexual orientation, belief, or other forms of social differentiation play in world cultures or societies.
	• Speak, read, and write a language other than English, and use that language to respond to cultures other than one's own.

B. U.S. Experience in its Diversity A Flexible Core course must meet the three learning outcomes in the right column.	
	• Gather, interpret, and assess information from a variety of sources and points of view.
	• Evaluate evidence and arguments critically or analytically.
	• Produce well-reasoned written or oral arguments using evidence to support conclusions.
A course in this area (II.B) must meet at least three of the additional learning outcomes in the right column. A student will:	
	• Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring the U.S. experience in its diversity, including, but not limited to, anthropology, communications, cultural studies, economics, history, political science, psychology, public affairs, sociology, and U.S. literature.
	• Analyze and explain one or more major themes of U.S. history from more than one informed perspective.
	• Evaluate how indigenous populations, slavery, or immigration have shaped the development of the United States.
	• Explain and evaluate the role of the United States in international relations.
	• Identify and differentiate among the legislative, judicial, and executive branches of government and analyze their influence on the development of U.S. democracy.
	• Analyze and discuss common institutions or patterns of life in contemporary U.S. society and how they influence, or are influenced by, race, ethnicity, class, gender, sexual orientation, belief, or other forms of social differentiation.
C. Creative Expression	
A Flexible Core course must meet the three learning outcomes in the right column.	
	• Gather, interpret, and assess information from a variety of sources and points of view.
	• Evaluate evidence and arguments critically or analytically.
	• Produce well-reasoned written or oral arguments using evidence to support conclusions.
A course in this area (II.C) must meet at least three of the additional learning outcomes in the right column. A student will:	
	• Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring creative expression, including, but not limited to, arts, communications, creative writing, media arts, music, and theater.
	• Analyze how arts from diverse cultures of the past serve as a foundation for those of the present, and describe the significance of works of art in the societies that created them.
	• Articulate how meaning is created in the arts or communications and how experience is interpreted and conveyed.
	• Demonstrate knowledge of the skills involved in the creative process.
	• Use appropriate technologies to conduct research and to communicate.

D. Individual and Society A Flexible Core course must meet the three learning outcomes in the right column.	
	• Gather, interpret, and assess information from a variety of sources and points of view.
	• Evaluate evidence and arguments critically or analytically.
	• Produce well-reasoned written or oral arguments using evidence to support conclusions.
A course in this area (II.D) must meet at least three of the additional learning outcomes in the right column. A student will:	
	• Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring the relationship between the individual and society, including, but not limited to, anthropology, communications, cultural studies, history, journalism, philosophy, political science, psychology, public affairs, religion, and sociology.
	• Examine how an individual's place in society affects experiences, values, or choices.
	• Articulate and assess ethical views and their underlying premises.
	• Articulate ethical uses of data and other information resources to respond to problems and questions.
	• Identify and engage with local, national, or global trends or ideologies, and analyze their impact on individual or collective decision-making.
E. Scientific World A Flexible Core course must meet the three learning outcomes in the right column.	
	• Gather, interpret, and assess information from a variety of sources and points of view.
	• Evaluate evidence and arguments critically or analytically.
	• Produce well-reasoned written or oral arguments using evidence to support conclusions.
A course in this area (II.E) must meet at least three of the additional learning outcomes in the right column. A student will:	
	• Identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring the scientific world, including, but not limited to: computer science, history of science, life and physical sciences, linguistics, logic, mathematics, psychology, statistics, and technology-related studies.
	• Demonstrate how tools of science, mathematics, technology, or formal analysis can be used to analyze problems and develop solutions.
	• Articulate and evaluate the empirical evidence supporting a scientific or formal theory.
	• Articulate and evaluate the impact of technologies and scientific discoveries on the contemporary world, such as issues of personal privacy, security, or ethical responsibilities.
	• Understand the scientific principles underlying matters of policy or public concern in which science plays a role.