

**DEPARTMENT OF NATURAL SCIENCES
LAGUARDIA COMMUNITY COLLEGE
CITY UNIVERSITY OF NEW YORK
STUDENT SYLLABUS**

Course Title: Human biology in health and disease

Course Hours/Credits: 3 hours (2 lecture; 1 Computer lab) – 3 credits

Prerequisites: CSE099, ENG099, MAT096 or Waivers

Instructor:

Office:

Phone:

Email address:

Class Time:

Office Hours:

Course Information: fulfills the Pathways Scientific world requirement

Human Biology is a 3-credit course, intended for non-science majors, comprised of 2 lecture hours and one hour of interactive exercises in a computer lab. This course is designed to provide an overview of anatomical and physiological organ systems under different states of health and disease. A comprehensive tour through the human body will take students through the structure and functioning of several systems, including, but not limited to, the cardiovascular, respiratory, nervous, gastrointestinal, immune, and reproductive systems. Each of these systems will be examined under normal conditions and from the perspective of the disease. A variety of pathological conditions and contemporary health-related issues, including diabetes, heart and kidney diseases, neurodegenerative conditions, autoimmune diseases, cancer, aging, stem cells, genetic engineering, genetic counseling, human microbiome, psychoactive agents, birth control and contraception, sexually transmitted diseases, and health risks associated with drugs and smoking will be covered with an emphasis on how many diseases involve multiple organ systems. A variety of learning activities will be used to broaden the students' awareness of human biological systems, including lectures, videos, virtual laboratory activities and case studies.

Course Textbook: Patton & Thibodeau. 2018. The Human Body in Health & Disease. 7th Edition. Mosby, ISBN 978-0-323-40211-8.

Learning Outcomes, Objectives and/or Competencies:

This course meets the general education (core) science requirement and provides students with opportunities to:

- 1- Develop and utilize critical reasoning skills.
- 2- Understand and apply the scientific method and making a proper hypothesis.
- 3- Enhance and expand their knowledge base of biological principles, with a special emphasis on human organ systems.
- 4- Explore practical and ethical issues of contemporary biology.

Assessment of Student Learning:

Course Evaluation:

Three Online exams including the final (20% each): 60%

Lab reports (3 @ 3% each): 9%

Online quizzes (3@ 4%): 12%

Research paper and Group oral presentation: 15%

Course participation and Discussion board responses: 4%

Total: 100 %

Final Grading Scale:

92.5-100 = A	89.5-92.4 = A-	86.5-89.4 = B+
82.5-86.4 = B	79.5-82.4 = B-	76.5-79.4 = C+
72.5-76.4 = C	69.5-72.4 = C-	66.5-69.4 = D+
62.5-66.4 = D	59.5-62.4 = D-	0-59.4 = F

Online Exams: There will be 3 exams on Blackboard. Each exam's value is 20% of the total grade. Questions will be on the topics that are covered in both lectures and computer labs, and will be in the format of multiple choice, labeling, matching, fill in the blank, true/false and short answers. **Exams including final are not cumulative!**

Lab reports: Students will write reports based on computer exercises. The exact lab exercises that the students write up will vary from semester to semester, but there will be 3 in total. They are to be submitted electronically to the "Safe Assign/turnit in" on Blackboard.

Online quizzes: There will be 3 short quizzes on Blackboard, and include multiple choice and true/false questions. Each quiz corresponds to 4% of the total grade.

Research paper and oral presentation: Students will write a research paper on the specific topic and give a presentation in class.

For this assignment, students will be asked to write a 4-page research paper based on the available scientific literature. This assignment provides an opportunity for students to explore an area of their interest in Human Biology in greater depth than time allows in other anatomy/physiology courses. Research in the field of human biology in health and disease has important implications for individuals, and society at large.

As a group, students will develop a question about two different diseases that relate to the disruption of normal biology of one system. For example, Multiple sclerosis and Alzheimer's diseases are both related to changing the normal biology of the nervous system. Students will read and analyze the literature, and will form conclusions regarding how malfunctioning of different parts of one system would cause different diseases. Together students will submit a group project (in the format of PowerPoint slides) on the course ePortfolio, and give a final group oral presentation.

Although students will work on this project as a group, but each student will turn in an individual research paper. Because this is a group effort, it is expected the content of the papers to be quite similar while each student's writing style must be unique.

There are four components of this project that should be turned in and posted on the course ePortfolio on the dates indicated by the instructor (see below):

1- Group project topic

Date: DD/MM/YY (Week 5)

The project topic should be typed, double spaced, and 1-2 pages long. Only one project topic write-up will be turned in for the whole group. It should include:

- Title & research question
- Paragraph description of your project
- Two or more sources of information
- A brief explanation of each of the two articles, and why they are appropriate for your project.

2- Group final Oral presentation

Date: DD/MM/YY (Week 12)

Groups are required to use PowerPoint for their final presentation, however, other forms of media may additionally be used (i.e., videos, overheads, audiotapes, handouts). Each presentation should take about 10 minutes and each member in the group is required to participate in the presentation. After the presentation, there will be a 5-minute question and answer period.

3- Peer Review

Date: DD/MM/YY (Week 12)

Peer review (1-2 pages) is an evaluation of what each group member contributed to the group project. Evaluate your group members (including yourself) in terms of how much effort and cooperation they put into the task, and any other criteria you feel are important. Please assign each group member a letter grade (A-, B, C+, etc).

4- Individual Research Paper

Date: DD/MM/YY (Week 11)

- Length: The paper length should be 4 pages maximum, double spaced and typed.
- Elements:
 - A. Cover sheet
 - B. Abstract; Not more than 200 words
 - C. Introduction
 - D. Body
 - E. Conclusion
 - F. Acknowledgment
 - G. References
- FORM:
 - A. Correct spelling.
 - B. Correct Grammar and use of words (not awkward or inappropriate)
 - D. Proper citation (citations used frequently and listed in reference section).
 - E. The paper should be in APA or MLA format.

Standards (Rubrics) for Grading Research Paper Assignment:

Excellent (100-90% of points):

- Well organized with strong structure
- Clear focus
- Complete – Fully answers the questions
- Clear – Explains the answer comprehensibly
- Effective use of language
- Well supported by the scientific literature
- Demonstrates insight into the issue

Good (89-80% points):

The good paper demonstrates all the above qualities but perhaps to a lesser degree, or demonstrates some of the above qualities but not all of the qualities are presented at a consistently high level.

Satisfactory (79-70% points):

The satisfactory paper presents all of the above qualities but not as strongly as the good paper. Insight is not usually present.

Needs Work (69-60% points):

This paper is weak on many of the desired qualities.

Unacceptable (59-0% points):

This paper presents few, if any, of the desired qualities.

Course participation and Discussion board responses:

For class participation purposes, discussion board forums have been created on Blackboard, in the "Discussions" section of the course menu. The forums require students to carefully read and reply to the prompts posted by the instructor.

Other Requirements:

You will need the following to access the online materials for this course:

- 1- A computer with Microsoft Office (Microsoft PowerPoint, Microsoft Word etc.).
- 2- Access to the Internet via a high-speed (broadband) connection (e.g., fiber, cable or DSL)
- 3- A recent version of a web browser (Google Chrome preferably)
- 4- A CUNY Portal ID to enable you to login to Blackboard, where your SCB103 course and its materials are located.

5- All online course meetings will take place on Blackboard Collaborate. Please note: *Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live.*

Important Note:

Please make sure to check your CUNY school email or the email listed on Blackboard as your preferred email address at least once every day. Your instructor will be sending you course-related announcements on this email address.

Online Etiquette Guidelines:

The University strictly prohibits the use of University online resources or facilities,

including Blackboard, for the purpose of harassment of any individual or for the posting of any material that is scandalous, libelous, offensive or otherwise against the University's policies. Please see: [Student Netiquette Guide for an Online Academic Setting](#).

Academic Integrity:

Academic dishonesty is unacceptable and will not be tolerated. Cheating, forgery, plagiarism and collusion in dishonest acts undermine the educational mission of the City University of New York and the students' personal and intellectual growth. Please see: [CUNY Policy on Academic Integrity on the LaGuardia Website](#).

Student Support Services:

If you need any additional help, please visit [Student Support Services](#).

LECTURE and LAB COURSE CALENDAR

Week	Lecture's Topics (2 hours)	Computer lab's Topics and Activities (1 hour)
1 Date:	Introduction to body, Chemistry of Living things	Virtual Labster lab on "Atomic Structure (Principles): Atoms and isotopes"
2 Date:	Chemistry of Living things, discussion of food labels, enzymes Online Quiz#1	Virtual Labster lab on "Your Diet and Your DNA"
3 Date:	Cells, DNA, Genes, Genetic engineering	<u>Lab report 1 Due: Student can pick either week 1 (Atomic structure) or week 2 (Your Diet and DNA) Lab for this report</u> Virtual Labster lab on "Cell Structure: Cell theory and

		internal organelles”	
4 Date:	Cell Division, Mitosis, Cancer, Stem cells	<u>Lab report 2 on “Cell Structure: Cell theory and Internal Organelles” Due</u> Virtual Labster lab on “Mitosis: Using a toxic compound from the yew tree in cancer therapy”	
5 Date:	Genetics and Inheritance, Gene therapy, Cloning <u>Exam 1</u>	Class work: https://learn.genetics.utah.edu/content/genetherapy/	
6 Date:	Tissues, Blood, Circulatory System <u>Online</u> <u>Quiz#2</u>	Virtual Labster lab on “Antibodies: Why are some blood types incompatible?”	
7 Date:	Respiratory system, Cardiovascula r and respiratory system diseases	<u>Lab report 3 Due: Student can pick either week 4 (Mitosis) or week 6 (Antibodies) Lab for this report</u> Blood pressure activity Heart and Lung Models	
8 Date:	Digestive system <u>Exam 2</u>	Digestive System Model	
9 Date:	Nervous system, Neurodegene rative	Brain and Neuron Models	

	diseases	
10 Date:	Immune system, Infectious diseases, HIV <u>Online Quiz#3</u>	
11 Date:	Reproductive system, Pregnancy, Human development	<u>Class Activity: What are the stages of development before birth, virtual lab</u> http://www.glencoe.com/sites/common_assets/science/virtual_labs/grade8/LS26/LS26.html
12 Date:	Birth control and sexually transmitted diseases	
13 Date:	<u>Exam 3</u> <u>(Final)</u>	<u>Oral presentation and Final research paper due</u>

Interactive tutor

http://glencoe.mheducation.com/sites/007874184x/student_view0/unit1/chapter1/interactive_tutor.html