Natural Sciences II: ***The Human Body: How it Works***
V55.0309, *Morse Academic Plan, Natural Sciences*
Lectures ***T&R*** *9:30 to 10:45 207 Silver*

Dr. Burt Goldberg
Chemistry Department
Associate Professor of Biochemistry
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Office hours are Monday & Wednesday 2:00PM to 3:30 PM, in Room 1152 Brown or by appt.
Please email to set up and appt. if these hours present a problem.
Office Phone 998-7949

Course Description

This course will look at the following:

- Basic chemistry of living things
- The basic differences between bacteria and animal cells
- The general organization of the human body
- Several key body systems
- The disease process
- Genetics & biotechnology
- The ethics of scientific discovery

Course Objectives

- To develop a fundamental understanding of chemistry and biological chemistry.
- To observe in laboratory the skills needed to study these basic principles.
- To understand the methods of scientific investigation and how the human body functions.

Grade Point Allocation

Midterm exam 1	**20%**
Midterm exam 2	**20%**
Final exam	**30%**
Laboratory	**20%**
Homework	**10%**

Grading; ***100 to 95 = A, 94 to 90 = A-, 89 to 85 = B+, 84 to 80 = B, 79 to 75 = C+, 74 to 70 = C, 69 to 65 = D.***

In class assignments will be regularly collected and reviewed for completeness during your laboratory experience. There will be no formal grade given for these assignments, but existence and completeness is noted for deciding cases of borderline grades at the end of semester.

Amongst the homework assignments there will be **1 graded question/ week** that review course material and relate to laboratory projects. These will be problem solving type questions. These questions will be awarded 2 pts. each assignment and 1 pt. for completeness.
All assignments must be submitted **on time**, (when collected during your lab period by the laboratory instructor), for full credit. Late assignments will be penalized **1 pts./day late**.
Late assignments must be placed in the mailbox outside Main 202.
If you miss lecture or laboratory, you are **still responsible** for work assigned and work that was to be collected! An absence from laboratory session requires documentation and acceptance of this as an excused absence is at Dr. Goldberg's discretion an only Dr. G. You must contact your laboratory instructor to make him/or her aware of your absence, and arrange to hand in work collected.
Questions from my lectures will be on the exams.

Exam Format and Policies

- The exams will contain questions covering the lectures, readings and laboratory projects. LETS THINK ABOUT SOMETHING, you pay how much for the text? You pay how much for the course? The difference is what I am worth to each of you. **Don't miss lecture!** The final exam will be cumulative, and cover topics covered from throughout the course. Homework assignments are practice at answering exam questions. Same for laboratory questions and graded homework assignments.
- If you miss one of the midterms because of illness, you must contact Dr. Goldberg at least 24 hours prior to the exam, by e-mail (bg43@nyu.edu). **A doctor's note is mandatory!** For an absence to be considered an excused absence, this is mandatory. **No makeup exams are at Dr. G discression**. Instead the final exam will be worth 50% of your final (total) grade. Remember this is a cumulative exam. **If you miss both midterms for any reason, you must withdraw from the course. This is not open for negotiation**.
- Only under **very exceptional circumstances** will a makeup for the final be given. This must be discussed prior to the exam and not at the end of the semester. In this case an **I**ncomplete will be given and it is up to the student to seek out Dr. Goldberg and set a date for the makeup. It will be during the Spring Semester, at Dr. Goldberg's convenience.

Laboratory Policies

- You must be registered for the laboratory! This is not negotiable for any reason. It is an integral part of the course and your grade. If you are not in a laboratory section by Project #2, you **must** withdraw from the course.

Enrollment in any section of laboratory is not increasable beyond the set limits on student number (20 students/laboratory) and do not bother to ask. This is not dictated by me but is rather the occupancy rules of the FDNY.

- You are expected to be on time. Arriving 10 minutes late is considered an absence, and loss of credit for the lab session.
- Questions for laboratory quiz will be based on the description of the experiment in the laboratory manual and will include pertinent lecture and readings material. Arriving 10 minutes late for a laboratory session, you are excluded from the quiz and will be given no credit as a grade (**0**).
- Laboratory assignments are handed in on time. Those collected at end of laboratory session and those questions that are given out and are to be handed in during the next session, must be on time.
- Missing more than 3 laboratory sessions for any reason will result in receiving a score of zero for the entire laboratory component of the course. This is not negotiable and is enforced, strictly!
- If you miss a session due to special circumstances, including observing a religious holiday, you must notify the Dr. Goldberg and your laboratory instructor before the session.
- **There is no way to makeup a missed laboratory by going to another session. They are FULL, and we cannot accommodate makeup students. But, you are responsible for the material missed and any assignments due.**

Course Text and Internet Access

Required texts;

- *Text is "Biology of Humans" by Goodenough, McGuire & Wallace, 2nd edition. The laboratory Manual is "Natural Science I: The Human Body & How it Works, V55.0306". This is a new text for this course and not the text that was previously used.*
- *We will also employ for lecture **BLACKBOARD**. Please make sure that you have an NYU email address. I will post readings and websites that will enrich the course. It will also serve as a sort of class 'chatroom' for all of us to communicate beyond the lecture room. There will always be postings on the **BLACKBOARD** site to keep you informed as to important notices and course information about the course. Assignments will be posted on **BLACKBOARD** as will the answers. Handouts will also be posted on **BLACKBOARD**. It is important that you check **'Announcements' on BLACKBOARD regularly.***

Lec #	Date	Chapter & pages	Topic	Lab: R & F Rm 203	Assignment, pages & questions
1	Sept, 4T	*1, pgs 2-11*	*Introduction*		*pg 13, R.C.#1, 3,4,5,&9 A.C. 1 & 3*
2	6 R	*2, 14-34*	*Chemisery*		*pg 35R.C. #1,2,3,6,7,8,9,10-16 A.C. 1 & 2.*
3	11T	*3,*	*The Cell*		*pg 61,R.C. #1-7,10, & 11 A.C. 2 & 3*
4	13R	*4,*	*Cells to Organs*	*#1The Microscope*	*pg 81 R.C. #1-7, 12 & 13 A.C. 2 & 3*
5	18T	*15,*	*Digestive system*		*pg 312 R.C. # 1,2,4-11 A.C. 2 & 3*
6	20R	*15a Nutrition & weight control*	*Metabolism*	*#2 Omosis & Diffusion*	*"Current Issues in Biol" v3, article ,pg 2 Obesity: an overblown epidemic? by Gibbs*
7	25T	*11*	*Blood*		*pg 210 R.C. # 1,-3,5-13, 15 & 16 A.C. 2,4,5 & 6*
8	27R	*10 Last topic for first exam*	*Endocrine System*	*#3 Digestion*	*pg 195 R.C. # 1-14 & 16*
9	Oct, 2T	*Review*			
10	4R	*Exam 1*		*No lab*	
11	9T	*19*	*Chromosomes & cell divisions*		*pg 423 R.C. # 1-6 A.C.2 & 3*
12	11R	*19a*	*Stem cells*	*#4 Blood type*	*"Current Issues in Biol" v4, article, pg 62 Buying time in suspended animation, by Roth & Nystul*
13	16T	20	Genetics & Inheritance		*pg 446 R.C. # 1-9 A.C. 1, 4 & 5*
14	18R	21	DNA & Biotechnology	*#5 Cholesterol I*	*pg 467 R.C. # 1-12 A.C. 1, 2 & 3*
15	23T	*21a*	*Cancer*		*"Current Issues in Biol" v2, article, pg 12, Tumor bursting viruses, by Nettlebeck & Curiel*
16	25R	*13*	*Body defenses*	*#6*	*pg 254 R.C. # 1-16*

				Cholesterol II	*A.C. 3*
17	**30T**	*13a*	*Infectious diseases*		*"Current Issues in Biol" in Microbiology, article, pg 30, Preparing for pandemic, by Gibbs & Soars also "Current Issues in Biol" v2, article, pg 2 Detecting Mad Cow disease, by Prusiner*
18	**Nov, 1R**	*14 & 14a*	*Respiratory system, Quit smoking!*	*#7 Respiration*	*pg 285 R.C. # 1-14 A.C. 2*
19	**6T**	*17*	*Reproduction*		*pg 368 R.C. # A.C*
20	**8R**	*17a,Last topic for exam*	*Sexually transmitted diseases*	*#8 HIV*	*"Current Issues in Biol" v3, article, pg 42 The challenge of STD's, by Ross*
21	**12T**	*Review*			
22	**15R**	*Exam 2*		*No Lab*	
23	**20T**	*12*	*Circulatory system*		*pg233 R.C. #1,2,4-12, 17-19. A.C. 2,3 & 4*
24	**22R**	**THANKS-GIVING**	**HOLIDAY**	*No Lab*	
25	**27T**	*6*	*Muscular system*		*pg 109 R.C. #1-11 A.C. 1,2 & 4*
26	**29R**	*7*	*Neurons*	*#9 Heart Dissection*	*pg 123 R.C. # 1-13 A.C. 1,3 &4*
27	**Dec, 4T**	*8*	*Nervous system*		*pg 140 R.C. # 1-15 "Current Issues in Biol" v4, article, pg 42 His Brain, Her brain, by Cahill*
28	**6R**	*16*	*Urinary system*	*#10 Urin-analysis*	*pg 348 R.C. # 1-10*
29	**11T**	*22*	*Evolution*		*"Current Issues in Biol" v2, article, pg 22, Does race exist? By Bamshad & Olson also "Current Issues in Biol" v4, article, pg 22, Founder mutations, by Drayna*

30	**13R**	*Review*		*No lab*	
	20R	*8:00 - 10:45 AM*	*FINAL EXAM*	*Room 207*	

Laboratory Schedule & Instructors

It is my pleasure to introduce the laboratory instructors for this course. **If you have questions or are going to miss a lab, you must not only email me 24 prior to missing lab but also your T.A.**

Students will be required to purchase from MAP or bring your own safety goggles. These are required from Lab#1 on. DO NOT forget them. We will not have goggles to loan. The price for them will be $5.00 (if you go to a hardware you will see that this is exceedingly cheap).

The laboratory Schedule; Room 203 Silver

Day & Section	*Times*	*Instructor (email)*
R 02	11 AM –12:40 PM	ANNA BRADY **agb5@nyu.edu**
R 03	1 PM – 2:40	ANNA BRADY
R 04	3 PM - 4:40	KRISTINA HARRIS **kmh217@nyu.edu**
R 05	5 PM - 6:40	KRISTINA HARRIS
F 06	9 AM –10:40 AM	KEREN IMBERG **ki357@nyu.edu**
F 07	11 AM- 12:40 PM	KEREN IMBERG