

**Kingsborough Community College of The City University of New York**  
**Department of Biological Sciences**  
**718-368-5502**

**Biology 70: The science of Nutrition, 3 credits/3 hours**

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**Course Information**

This course satisfies college requirements for a Group V science course. It does not meet CPI requirements for credit in the science area. This course is not required for Biology majors nor can Biology majors use this course as credit toward the biology major.

**Course Description**

Biology 70 presents the principles of nutritional science and does not require previous science background. Biological and chemical principles are explained and applied to nutritional science as required. The course begins with an introduction to basic nutritional principles and the systems organization of the human body. Study of the anatomy and physiology of the digestive system follows. Nutrients are then considered sequentially - water, carbohydrates, lipids, protein, vitamins, and minerals. Discussions of body weight maintenance and loss, healing, common diseases, herbs, pregnancy diets, athletic nutritional needs, environmental contamination of the body, and current nutritional advertising occur in the context of each major course area. Students are encouraged to ask questions; those of general interest will be covered in class; those of a more personal nature will be deferred and answered privately. Successful completion of the course requires passing the unit examinations, e-mail submission of a research summary, submission of an analyzed personal diet survey, and passing the final examination.

**Meeting Day**

Wednesday 6:00 pm - 9:00 pm Room -----

Friday 6:00 pm - 9:00 pm Room -----

**Textbook**

Boyle, M.A., and Long, S., Personal Nutrition, 9th Edition. ISBN: 978-1305110427

**Course Goals**

1. Develop the knowledge to select a diet healthy for now and for one's lifetime.
2. Apply the scientific method to investigate nutritional issues and evaluate food labels and claims.
3. Analyze the interactions of nutrients in the framework of the body's metabolic patterns.
4. To involve students in the study of current nutritional research efforts.
5. Analyze the influence of marketing forces on foods and supplements regarding consumer purchases.

**Student Learning Objectives**

1. List and describe the basic food components: proteins, carbohydrates, fiber, lipids, vitamins, minerals, and water.
2. Distinguish between a nutritional claim and a health claim on a food product label.
3. Describe how individual health is affected by nutritional status.
4. List and describe the types of disorders associated with altered nutritional status.
5. List at least four healthful strategies for eating at "fast food" establishments.
6. Explain how the media (TV, newspapers, magazines) influences our food choices.
7. Explain how the My Pyramid is used for healthy meal planning.
8. Describe the *Dietary Guidelines for Americans*, and explain their purpose.

9. Recognize that fats and refined sugars can be obtained from almost any food group and that both the types and amounts of fats should be carefully controlled in order to eat a healthful diet.
10. Explain how you would determine the percent daily value for carbohydrates, fats and protein for a person on a 2000-calories-a-day diet.
11. Use the food composition tables on the website ([www.mypyramid.gov](http://www.mypyramid.gov)) to determine: calories, grams of carbohydrates, fats and protein for a serving of a particular meal

### **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.

### **Academic Integrity Policy**

- To reach academic success, one needs to uphold the 5 core values of honesty, trust, fairness, respect and responsibility. Failure to do so may result in charges of academic dishonesty. Academic dishonesty is prohibited by CUNY and Kingsborough Community College and is punishable by penalties, including failing grades, suspension, and expulsion. Examples of academic dishonesty include, but are not limited to, cheating, plagiarism, internet plagiarism, obtaining unfair advantages, and falsification of records.
- Plagiarism is the intentional use of another's intellectual creations without attribution (giving credit to the author). This is theft of materials from another author, and is prohibited. Determination and penalty- ranging from grade reduction to course failure - is at the discretion of individual faculty members.

### **Attendance Policies**

- Attendance will be taken at the start of class. Any student not present when attendance is taken will be marked *absent*. If a student arrives late to class, it is the responsibility of the student to inform the instructor at the end of class that he/she came in late. At that point, the *absence* will be changed to *late*. If a student does not inform the instructor that he/she came in late, that student remains marked as *absent* for that class.
- A grade of WU is to be assigned to students who attended a minimum of one class, completely stopped attending at any time before final exam week, and did not officially withdraw.
- Absence from exams earns a zero on the exam. Assignments submitted late receive partial credit.

### **How Your Grade is Computed**

4 Examinations	15 points each	= 60	(Based on lectures and text)
Journal Report	10 points	= 10	
Diet Survey and Analysis	10 points	= 10	
Final Examination	20 points	= <u>20</u>	
Total		= 100 points	

## Course Outline

<b>Week</b>	<b>Topic</b>	<b>Textbook Reading</b>
1 - 3	Basic Nutritional Concepts Digestive System Basic Biology and Chemistry	Chapters 1, 2, and 3
<b>During week 4 you will have examination #1 (ch.1,2,3)</b>		
4	Water	Chapter 8
5	Carbohydrates	Chapter 4
<b>Research summary is due 1<sup>st</sup> class of week 5</b>		
6	Carbohydrates, continued	Chapter 4
	Lipids	Chapter 5
7	Lipids, continued	Chapter 5
<b>During week 6 you will have examination #2 (ch.4,8)</b>		
8	Proteins	Chapter 6
9	Energy and Weight Control	Chapter 10
<b>Diet Analysis is due week 9</b>		
10	Vitamins	Chapter 7
<b>During week 8/9 you will have examination #3 (ch.5,6)</b>		
11	Minerals	Chapter 8
12	Minerals & Review	Chapter 8
<b>During week 12 you will have examination #4 (ch.7,8,10)</b>		

## Journal Report

This report **must follow** the following **format**. All reports must come from research articles in *The American Journal of Clinical Nutrition* (in the KCC library). First page of the original report must be stapled at the back of your report

1. What Title
2. Who Authors
3. When Date of Publication
4. Where What City, hospital, location in general.
5. How Type of study: e.g., epidemiological, controlled, double blind
6. N Number of subjects in the study.
7. Length/Repetitions How long did the study take to complete and was it repeated (or only done once).
8. Organism used Human, rat, insect, or microorganism
9. Why/Conclusions Clearly explain **why** the authors say the study was done. **Clearly explain their conclusions.** This is the most important part of the report and should take-up at **least half a page** in essay format.
10. Evaluation How would you judge the worth of the report based on items 1-9, the knowledge you have gained in this course, and your common sense? at **half a page**

## Diet Survey and Analysis

Your instructor will give you a form on which you may record your diet and do the required analysis. If data are missing (such as computation of the % RDA values for your particular diet) you will receive only partial credit for the report.

## Final Examination

The final examination is cumulative; you must review the entire term's work.