

BIOCHEMISTRY (BISC 3521)
Department of Biological Sciences, Fordham University
Summer 2019

Instructor

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Office hours

Wednesday and Thursday 1-3pm

Text Books

“Biochemistry”, 9th Edition, by Campbell/Farrell/McDougal

Lecture Notes

Lecture notes will be posted on Blackboard. I will also use Blackboard to post any materials relevant to the course. I will assign reading and problems, if any, on a daily basis.

Course Description

A lecture course on the basic principles of biochemistry. Topics include the structure and function of carbohydrates, lipids, proteins, and nucleic acids; enzymology; metabolism; and bioenergetics. Clinical implications are also discussed throughout the course.

Exams

Four exams will be given during the semester, counting 100 points each. The fourth exam will serve as the final exam (not accumulative). The exam format will be a combination of multiple choice, short answers, and problems. All the exams are aimed in testing your ability of understanding the materials on the lecture notes and using the information on the lecture notes to solve problems. You are strongly encouraged to attend the classes and read the textbook to reaffirm your understanding of the materials on the lecture notes.

Final Scores and Grades

Your final scores will be calculated as follows:

Among the scores for your four exams, the lowest score will only count 7%, whereas the other three scores will count 31% each.

For example, if you get 60 points for exam #1 and 90 points for each of the other three exams, your final score will be:

$$4.2\% + 27.9\% + 27.9\% + 27.9\% = 87.9\%$$

As a comparison, if all four exams were weighed equally, your final score would have been as follows:

$$60+90+90+90/4 = 330/4 = 82.5\%$$

Your letter grade will be based on the following scale:

A	=	94-100%
A-	=	90-93.99%
B+	=	87-89.99%
B	=	83-86.99%
B-	=	80-82.99%
C+	=	77-79.99%
C	=	73-76.99%
C-	=	70-72.99%
D+	=	67-69.99%
D	=	60-66.99%
F	=	59.99% or lower

Depending on the performance of the class, I may decide at the end of the semester to shift the scale downward slightly (for example if no one makes $\geq 94\%$), but I will not shift the scale upward.

Chapters/Topics

01 Biochemistry and the Organization of Cells
02 Water: The Solvent for Biochemical Reactions
03 Amino Acids and Peptides
04 The Three-Dimensional Structure of Proteins
05 Protein Purification and Characterization Techniques
Exam #1
06 The Behavior of Proteins: Enzymes
07 The Behavior of Proteins: Enzymes, Mechanisms, and Control
08 Lipids and Proteins Are Associated in Biological Membranes
09 Nucleic Acids: How Structure Conveys Information
Exam #2
15 The Importance of Energy Changes and Electron Transfer in Metabolism
16 Carbohydrates
17 Glycolysis
18 Storage Mechanisms and Control in Carbohydrate Metabolism
Exam #3
19 The Citric Acid Cycle
20 Electron Transport and Oxidative Phosphorylation
21 Lipid Metabolism
23 The Metabolism of Nitrogen

24 Integration of Metabolism: Cellular Signaling
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Exam #4 (Final exam)

Note: the exact days for exam #1, #2, and #3 will be set around a week ahead, which is flexible. The day for the final exam will be set depending on how much time majority of the students want to prepare for their final exam.