

Attention!

This is a *representative* syllabus.

The syllabus for the course when you enroll may be **different**.

Use the syllabus provided **by your instructor** for the most up-to-date information. Please refer to your instructor for more information for the specific requirements for a given quarter.

BIOCHEMISTRY 511
INTRODUCTORY BIOCHEMISTRY
Class # 26093, 5 credits
Spring Quarter 2010

Dr. Beth Gray

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I don't have office hours but am available Monday, Wednesday, and Friday after 2:00. You can either stop by my office or make an appointment.

Prerequisites Chem 123 and 252, and 2 qtrs of biological sciences.

Resources

Required:

Principles of Biochemistry, 4th Edition. H.R. Horton, L.A. Moran, K.G. Scrimgeour, M.D. Perry, and J.D Rawn. Pearson Prentice Hall, Inc. 2006
ISBN 9780131453067 (3rd edition is probably ok too)

Optional:

The Biochemistry Student Companion, 2nd edition A.J. Scism. Prentice Hall, Inc. 2002
ISBN 9780131476059

Companion Prentice Hall website: http://wps.prenhall.com/esm_horton_biochemistry_4/

Lecture Topics, Reading Assignments (subject to change as we run out of time)

Introduction, properties of water, pH	Chapter 1 and 2
Amino acids	Chapter 3
Protein structure and function	Chapter 4
Enzymes	Chapter 5
Enzyme Mechanisms	Chapter 6.1-6.4, 6.8
Coenzymes and Vitamins	Chapter 7.1-7.7; 7.12; 7.14; 7.16
Carbohydrates	Chapter 8.1-8.3, 8.5-8.7
Lipids and Membranes	Chapter 9.1-9.3, 9.6, 9.8-9.12
Metabolism	Chapter 10
Glycolysis	Chapter 11.1-11.6
Additional Carbohydrate metabolism	Chapter 12.1-12.3, 12.5-12.7
Citric Acid Cycle ("Krebs Cycle")	Chapter 13
Electron Transport & Oxid. Phosphorylation	Chapter 14.1-14.12
Lipid metabolism	Chapter 16.1, 16.3, 16.7, 16.9-16.11
Nucleic Acids	Chapter 19
DNA replication	Chapter 20.1-20.7
Transcription & RNA Processing	Chapter 21
Protein synthesis	Chapter 22
Recombinant DNA technology	Chapter 23

Course Grading

Eight quizzes and two problem sets worth 10 points each; drop the lowest two. Exams 1 and 2 will be given during class time. Exam 3, which will be given during Finals week, is not cumulative but covers a larger proportion of lecture material, and thus is worth more points.

<u>Item</u>	<u>Points</u>	<u>Grade</u>	<u>Percentage</u>
8 Qz/PS at 10 each	80	A	91-100
Exam 1	100	A-	85-90
Exam 2	100	B+	82-84
Exam 3	<u>120</u>	B	78-81
	400	B-	75-77
		C+	72-74
		C	68-71
		C-	65-67
		D+	62-64
		D	55-61

Quiz, Problem Set, Exam schedule (subject to change):

M	April 5	Quiz 1
M	April 12	Quiz 2
F	April 16	Quiz 3
M	April 19	Exam 1
F	April 23	Problem Set 1 (due W, April 28)
F	April 30	Quiz 4
F	May 7	Quiz 5
M	May 10	Exam 2
F	May 14	Problem Set 2 (due W, May 19)
F	May 21	Quiz 6
F	May 28	Quiz 7
F	June 4	Quiz 8
W	June 9	Exam 3, 8-9:48

Carmen:

Carmen can be accessed from the OSU Lima homepage or at <https://carmen.osu.edu>. Your username is your OSU account (last name.#), and the password is the same as for your OSU e-mail account.

Carmen has lecture notes, links, the course calendar, handouts, and whatever else might be useful. PowerPoints of what was covered in lecture will be posted after class meetings. These notes are a supplement to lecture, not a substitute, and you can only be certain of having material needed for class by attending and taking notes yourself. Your grades will also be posted on Carmen.