Biochemistry Ph.D. Program
of the
The City University of New York

BICM 71010 **ADVANCED BIOCHEMISTRY I** **FALL 2006**
Fridays, 10:00 AM – 12:45 PM, Room 6495

SCHEDULE OF LECTURES

September 1 – October 27 **Professor Rotenberg (susan_rotenberg@ qc.edu)**
November 3 - December 15 **Professor Schulz (hoschu@sci.ccny.cuny.edu)**

Recommended textbook: *Biochemistry*, 3rd Edition, D. Voet, and J. G. Voet, John Wiley & Sons, New York, 2003.

DATE	TOPIC
September 1	Amino acids, pKa's; peptides; primary structure of proteins; secondary, tertiary, and quaternary structure
September 8	Protein-related techniques: isolation, analysis, and sequencing
September 15	Protein-related techniques (continued)
September 22	NO CLASS
September 29	Enzymes: catalysis, mechanisms; structure-function relationships
October 6	Enzymes: kinetics, inhibitors, pH, temp, etc.
October 13	Hemoglobin, allosteric proteins
October 20	Antibody structure, diversity and recognition Applications to molecular analysis of proteins
October 27	**MIDTERM EXAMINATION**
November 3	Principles of metabolic regulation and signal transduction pathways; glycolysis and gluconeogenesis.
November 10	Pentose phosphate pathway, glycogen metabolism and other aspects of carbohydrate metabolism.
November 17	Citric acid cycle, glyoxylate cycle, and fatty acid metabolism.
November 22 (Wed)	Metabolism of phosphoglycerides, triacylglycerol, sphingolipids and cholesterol
December 1	Urea cycle and amino acid metabolism
December 8	Nucleotide metabolism
December 15	**FINAL EXAMINATION**
January 5	**FIRST LEVEL EXAMINATION**