

BIOCHEMISTRY WITH A MEDICAL PERSPECTIVE

Online Biochemistry Course, Faculty of Medicine, University of Toronto, Canada

Course Schedule

Fall Semester 29 September 2014 to 21 Feb 2015

Week	Section / Online Quiz	Dates (Week Start)	Video Lecture Topics	Lecturer	Text Chapter	Clinical Insights By Dr. Murray
1 & 2	Biochemistry Basics and Proteins	29 Sep 2014	E - presence Controls Video Course Introduction to Biochemistry Water and pH Amino Acids Protein 3D Structure	Dr. Reithmeier	1 2 3 4	Water and pH Balance Vitamin C Deficiency Causes Scurvy
Quiz 1		14 Oct 2014	**QUIZ MOVED TO TUESDAY			
3 & 4		13 Oct 2014	Enzymes Hemoglobin	Dr. Baker	6-8 9	Variations in Km Can Have Physiological Consequences Sickle Cell Anemia
Quiz 2		27 Oct 2014				
5 & 6		27 Oct 2014	Carbohydrates Lipids Membranes: Structure and Function	Dr. Baker Dr. Reithmeier	10 11 12, 13	Lactose Intolerance Digitalis
Quiz 3		10 Nov 2014				
7 & 8	Metabolism	10 Nov 2014	Metabolism, Glycolysis Glycogenolysis PDC, TCA, ETC, Ox.Phos/PMF	Dr. Baker	15, 16 24 18 – 21	Exercise Depends on Various Means of Generating ATP Beriberi-A Disease Due to Deficiency Of Thiamine (Vitamin B-1)
Quiz 4		24 Nov 2014				
9 & 10		24 Nov 2014	Fat Catabolism, Fat Synthesis Insulin Glycogen Synthesis Diabetes GNG	Dr. Baker	27-29 13, 27 25 27 17	Hyperglycemia GSDs
Quiz 5		08 Dec 2014				

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11 & 12		08 Dec 2014	Cholesterol Lipoproteins Eicosanoids PI Synthesis and Signalling AA Synthesis and Degradation	Dr. Baker Dr. Reithmeier	29 29 28 29, 13 30, 31	Tay-Sachs Disease Inherited Defects Of The Urea Cycle Cause Hyperammonemia
BREAK (20 Dec 2014 to 04 Jan 2015)						
Quiz 6		05 Jan 2015				
13 & 14	Nucleic Acids	05 Jan 2015	Nucleic Acid Structure Nucleotide Metabolism DNA Replication DNA Repair	Dr. Kelley Dr. Reithmeier Dr. Kelley	33 32 34 35	Some Genetic Diseases Are Caused by The Expansion of Repeats of Three Nucleotides Cancers Are Caused by Defective Repair of DNA
Quiz 7		19 Jan 2015				
15 & 16		19 Jan 2015	Transcription Gene Expression, Regulation RNA Processing	Dr. Kelley	36 37 38	Mutations that Affect pre-mRNA and Alternative Splicing Cause Disease
Quiz 8		02 Feb 2015				
17 & 18		02 Feb 2015	Genetic Code, tRNAs and Amino Acids Translation, Translation Regulation Protein Secretion Recombinant Technologies	Dr. Kelley	39 40 40 41	Some Antibiotics and Some Toxins Act by Inhibiting Protein Synthesis Gene Therapy, Transgenic Animals
MOCK Quiz		Available 16 Feb 2015				

Final Examination 2015

Date

21 February 2015

Time

9:30 am - 12:30 pm

Material Tested

Final exam includes all topics covered throughout the course