

BIOCHEMISTRY WITH A MEDICAL PERSPECTIVE

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

Course Schedule

Winter Semester 11 January 2021 to 22 May 2021

Week	Section / Online Quiz	Dates (Week Start)	Video Lecture Topics	Lecturer	Text Chapter	Clinical Insights By Dr. Murray
1 & 2	Biochemistry Basics and Proteins	11 Jan 2021	Course Introduction to Biochemistry Water and pH Amino Acids Protein 3D Structure	Dr. Reithmeier	1 2 3 4 5	Water and pH Balance Vitamin C Deficiency Causes Scurvy
	Quiz 1	25 Jan 2021				
3 & 4		25 Jan 2021	Enzymes Hemoglobin	Dr. Baker	6-8 9	Variations in Km Can Have Physiological Consequences Sickle Cell Anemia
	Quiz 2	08 Feb 2021				
5 & 6		08 Feb 2021	Carbohydrates Lipids Membranes: Structure and Function	Dr. Baker Dr. Reithmeier	10 11 12, 13	Lactose Intolerance Digitalis
	Quiz 3	22 Feb 2021				
7 & 8	Metabolism	22 Feb 2021	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	08 Mar 2021				
9 & 10		08 Mar 2021	Fat Catabolism, Fat Synthesis Insulin Glycogen Synthesis Diabetes GNG	Dr. Baker	27-29 13, 27 25 27 17	Hyperglycemia GSDs
	Quiz 5	22 Mar 2021				

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11 & 12		22 Mar 2021	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
	Quiz 6	06 Apr 2021	**QUIZ MOVED TO TUESDAY APR 6th			
13 & 14	Nucleic Acids	05 Apr 2021	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 Apr 2021				
15 & 16		19 Apr 2021	Transcription Gene Expression, Regulation RNA Processing	Dr. Kelley	36 37 38	Mutations that Affect pre-mRNA and Alternative Splicing Cause Disease
	Quiz 8	03 May 2021				
17 & 18		03 May 2021	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 17 May 2021				

Final Examination 2021

Date

22 May 2021

Time

3 hrs

Material Tested

Final exam includes all topics covered throughout the course