

# BIOCHEMISTRY WITH A MEDICAL PERSPECTIVE

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

## Course Schedule

Winter Semester 08 January 2018 to 26 May 2018

Week	Section / Online Quiz	Dates (Week Start)	Video Lecture Topics	Lecturer	Text Chapter	Clinical Insights By Dr. Murray
1 & 2	<b>Biochemistry Basics and Proteins</b>	08 Jan 2018	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
	<b>Quiz 1</b>	<b>22 Jan 2018</b>				
3 & 4		22 Jan 2018	Enzymes Hemoglobin	Dr. Baker	6-8 9	Variations in Km Can Have Physiological Consequences Sickle Cell Anemia
	<b>Quiz 2</b>	<b>05 Feb 2018</b>				
5 & 6		05 Feb 2018	Carbohydrates Lipids Membranes: Structure and Function	Dr. Baker Dr. Reithmeier	10 11 12, 13	Lactose Intolerance Digitalis
	<b>Quiz 3</b>	<b>20 Feb 2018</b>	<b>**QUIZ MOVED TO TUESDAY</b>			
7 & 8	<b>Metabolism</b>	19 Feb 2018	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)
	<b>Quiz 4</b>	<b>05 Mar 2018</b>				
9 & 10		05 Mar 2018	Fat Catabolism, Fat Synthesis Insulin Glycogen Synthesis Diabetes GNG	Dr. Baker	27-29 13, 27 25 27 17	Hyperglycemia GSDs
	<b>Quiz 5</b>	<b>19 Mar 2018</b>				

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11 & 12		19 Mar 2018	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	03 Apr 2018	**QUIZ MOVED TO TUESDAY			
13 & 14	Nucleic Acids	02 Apr 2018	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	16 Apr 2018				
15 & 16		16 Apr 2018	Transcription Gene Expression, Regulation RNA Processing	Dr. Kelley	36 37 38	Mutations that Affect pre-mRNA and Alternative Splicing Cause Disease
	Quiz 8	30 Apr 2018				
17 & 18		30 Apr 2018	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 14 May 2018				

## Final Examination 2018

### Date

26 May 2018

### Time

3 hrs

### Material Tested

Final exam includes all topics covered throughout the course