CHEM 3812: Biochemistry – Membranes and Metabolism

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Text

Lehninger Principles of Biochemistry, 8th Edition, Nelson and Cox, W.H. Macmillan Learning, 2021

Topic	Nelson and Cox 8th Ed.
Monosaccharides and Disaccharides	7.1
Polysaccharides	7.2
Glycoconjugates	7.3
Carbohydrates as information	7.4
Storage Lipids	10.1
Structural Lipids	10.2
Lipid as Signals, Cofactors, and Pigments	10.3
Membranes	11.1
Membrane dynamics	11.2
Transport across membranes	11.3
Signal transduction	12.1
G Proteins	12.2-12.3
Tyrosine Kinases	12.4
Gated Ion Channels	12.6
Cell Cycle Regulation	12.8
Oncogenes and Programmed Cell Death	12.9
Bioenergetics and Thermodynamics	13.1-13.2
Phosphoryl Group Transfer	13.3
Oxidation-Reduction Reactions	13.4
Regulation of Metabolism	13.5
Glycolysis	14.1/14.2
Fermentation	14.3
Gluconeogenesis	14.4
Regulation of Glycolysis and Gluconeogenesis	14.5
Citric acid Cycle	16.1/16.2/16.3
Regulation of TCA	16.4
Electron-Transfer in Mitochondria	19.1
ATP Synthesis	19.2
Regulation of Oxidative Phosphorylation	19.3

Grading

In-class Assignments: Four assignments, each worth 50 points

Hour Exams: Three hour exams, each worth 100 points

Exam I: Friday, January 28, 2022
Exam II: February 25, 2022
Exam III (final exam): March 16, 2022

Total Points = 4(assignments) + 3(Exams)
= 4(50) + 3(100)
= 500 points

Holiday: Martin Luther King Day January 17, 2022