

## Chapter 16 – Glycogen Metabolism and Gluconeogenesis

Objective	In-text reading	Pre-class materials/activities	In-class materials/activities	Practice problems from text
1. Compare and contrast glycogen synthesis and breakdown	16.1-16.2	Ch. 16 Hayden Lecture What is glycogen (supplemental video)	S30 – Glycolysis and Gluconeogenesis	4 <sup>th</sup> Edition: 5, 7, 9, S28 – Regulation of Glycogen Storage and Breakdown
2. Discuss the regulation of glycogen metabolism	16.3	Ch. 16 Hayden Lecture What does the pancreas do? (supplemental video) What does the liver do? (supplemental video)	S30 – Glycolysis and Gluconeogenesis	4 <sup>th</sup> Edition: 19, 21, S28 – Regulation of Glycogen Storage and Breakdown
3. Discuss the role of phosphorylating enzymes in order to activate or deactivate them	16.3	Ch. 16 Hayden Lecture	S30 – Glycolysis and Gluconeogenesis	S28 – Regulation of Glycogen Storage and Breakdown
4. Discuss the roles of insulin and glucagon in the regulation of glycogen metabolism.	16.3	Ch. 16 Hayden Lecture Insulin and Glucagon (Supplemental video)	S30 – Glycolysis and Gluconeogenesis	4 <sup>th</sup> Edition: 11
5. Compare and contrast glycolysis and gluconeogenesis	16.4	Ch. 16 Hayden Lecture Gluconeogenesis (Supplemental video)	S30 – Glycolysis and Gluconeogenesis	4 <sup>th</sup> Edition: 13,15, 17
6. Apply basic understanding of glycolysis and gluconeogenesis to real world problems			S30 – Glycolysis and Gluconeogenesis	S29: Glycolysis and Gluconeogenesis PS 1
7. Gain skills and confidence in solving complex, open-ended problems.		How to ask better questions (TEDx Talk)	S30 – Glycolysis and Gluconeogenesis	S29: Glycolysis and Gluconeogenesis PS 1
8. Develop your ability to communicate solutions clearly and concisely		Own Your Behaviours, Master Your Communication, Determine Your Success (TEDx talk)	S30 – Glycolysis and Gluconeogenesis	S29: Glycolysis and Gluconeogenesis PS 1