

BC 351 SCHEDULE: SPRING 2023

Exams will be offered from 7:00 to 8:50 AM. All other assignments are due at 8:00 AM Mountain Time on the due date.

Week (Dates)	Module #: Module Concepts	Lectures	Assignments Due	Due Dates
1 (Jan. 17 – Jan. 19)	1: How to Learn and Succeed in BC 351 Activity: Course Overview, Key Concepts, Big Ideas L1 T 1/17; Cancer Overview; Anticancer Drug Development L2&3 R 1/19;	L1 – L3 Text Ch2&3	Pre- BC Concept Inventory Module 1 Quiz & Survey Text Ch 3 Quiz Protein Folding Research Survey	Wed., Jan. 18 Mon., Jan. 23 Mon., Jan. 23 Wed., Jan. 25
2 (Jan. 23 – Jan. 26)	2: Key Elements in Organisms and Properties, Chemistry of Macromolecules L4 M 1/23; Bioenergetics L5 T 1/24; Free Energy Learning Activity W 1/25; Water, Weak Acids/Bases L6 R 1/26;	L4 – L8 Text Ch1&2	Free Energy LA Pre-Homework Example Exam (on Canvas) Module 2 Quiz & Survey Free Energy LA Post-Homework Text Ch 1&2 Quizzes	Tues., Jan. 24 Thurs., Jan. 26 Mon., Jan. 30 Mon., Jan. 30 Mon., Jan. 30
3 (Jan. 30 – Feb. 2)	3: Proton Hopping, Amino Acids L7&8 M 1/30; Amino Acid Polymers, Peptides L9&10 T 1/31; Peptide Bonds, Protein Primary Structure L10&11 W 2/1;	L9 – L11 Text Ch4&5	Module 3 Quiz & Survey Protein Project (Extra Credit) Text Ch 4 & A.A. Quizzes	Mon., Feb. 6 Mon., Feb. 6 Mon., Feb. 6
4 (Feb. 6 – Feb. 7)	4: Exam 1 Review R 2/2 Exam 1 on How to Succeed in BC 351 through Protein Primary Structure and Peptide Bonds		Exam 1: Lectures 1-11	Tues., Feb. 7
5 (Feb. 8 – Feb. 16)	5: Protein Secondary Structure L12&13 M 2/6 & W 2/8; Protein Tertiary and Quaternary Structure L14&15 R 2/9 & M 2/13; Protein Folding L16&17 T 2/14; Protein Structure/Function Learning Activity W 2/15; Intermolecular Interactions (Mb and Hb) L 18 R 2/16	L12 – L18 Text Ch5,6,8	Protein Folding LA Pre-Homework Exam Preparation Survey Responses Module 5 Quiz & Survey Protein Folding LA Post-Homework Text Ch 5 Quizzes Peptide Bkbone & 2 nd Struktr Quizzes Protein Folding Research Survey	Tues., Feb. 14 Mon., Feb. 15 Mon., Feb. 20 Mon., Feb. 20 Mon., Feb. 20 Mon., Feb. 20 Wed., Feb. 22
6 (Feb. 20 – Feb. 23)	6: Intermolecular Interactions (Mb and Hb) L19&20 M 2/20; Intermolecular Interaction Learning Activity T 2/21; Enzyme Catalysis L21,22&23 W 2/22, R 2/23, M 2/27	L19 – L23 Text Ch6&8	Module 6 Quiz & Survey Text Ch 6&8 Quizzes Hb/Mb Structure & Conf. Ch. Quizzes	Mon., Feb. 27 Mon., Feb. 27 Mon., Feb. 27
7 (Feb. 27 – Mar. 2)	7: Enzyme Kinetics L24&25 T 2/28 & W 3/1; Transmembrane Transport in Cancer L26 W 3/1; Membrane Lipids, Structure and Dynamics L27&28 M 3/6 & W 3/8	L24 – L27 Text Ch7&9	Module 7 Quiz & Survey Text Ch 7 Quiz	Mon., Mar. 6 Mon., Mar. 6
8 (Mar. 6 – Mar. 7)	8: Exam 2 Review R 3/2 Exam 2 on Protein Secondary Structure through Transmembrane Transport in Cancer		Exam 2: Lectures 12-26	Tues., Mar. 7

Week (Dates)	Module #: Module Concepts	Lectures	Assignments Due	Due Dates
Mar. 13-16	Spring Recess	None	None	None
9 (Mar. 8 – Mar. 22)	9: Membrane Lipids, Structure and Dynamics L28 W 3/8; Membrane Protein Structure and Function in Transmembrane Transport L29&30 R 3/9 & M 3/20; Transmembrane Transport Learning Activity T 3/21; Cancer Metabolism L31 W 3/22; Metabolism Back to Basics L32,33&34 R 3/23	L28 – L33 Text Ch9&10	Trnsmbrn Transport LA Pre-Homework Module 9 Quiz & Survey Trnsmbrn Transport LA Post-Hmwrk Text Ch9 Quiz	Tues., Mar. 21 Mon., Mar. 27 Mon., Mar. 27 Mon., Mar. 27
10 (Mar. 23 – Mar. 30)	10: Metabolism Back to Basics L 32,33&34 M 3/17; Phosphate Transfer & Oxidation-Reduction L35,36&37 T 3/28 & W 3/29; Metabolism Overview Learning Activity R 3/30	L34 – L38 Text Ch10&11	Module 10 Quiz & Survey	Mon., Apr. 3
11 (Apr. 3 – Apr. 6)	11: Canvas: Glycolysis – Glucose to Pyruvate L38&39 M 4/3 & T 4/4; Anaerobic Glycolysis, Gluconeogenesis - Pyruvate to Glucose L40,41&42 W 4/5 & M 4/10	L39 – L42 Text Ch11&10	Module 11 Quiz & Survey	Mon., Apr. 10
12 (Apr. 10 – Apr. 11)	12: Exam 3 review R 4/6 Exam 3 on Membrane Lipids and Membrane Structure through Gluconeogenesis		Exam 3: Lectures 27-41	Tues., Apr. 11
13 (Apr. 12 – Apr. 20)	13: Allosteric Enzyme Regulation L43 W 4/12, Metabolic Regulation – ATP/ADP Ratios and General Principles, Glycolysis vs. Gluconeogenesis L44, 45&46 R 4/13 M 4/17; Metabolic Regulation Learning Activity T 4/18; The Citric Acid Cycle, Citric Acid Cycle Regulation L47&48 W 4/19 & R 4/20	L43 – L48 Text Ch10, 11&12	Met. Regulation LA Pre-Homework Module 13 Quiz & Survey Met. Regulation LA Post-Homework Text Ch 10,11, 12 Quizzes Glycolysis & CAC Drag-N Drop Quizzes	Tues., Apr. 18 Mon., Apr. 24 Mon., Apr. 24 Mon., Apr. 24 Mon., Apr. 24
14 (Apr. 24 – Apr. 27)	14: Fatty Acid Catabolism L49 M 4/24; The Electron Transport Chain L50,51,52,53 T 4/25, W 4/26 & R 4/27	L49 – L52 Text Ch13&14	Module 14 Quiz & Survey Text Ch14 Quiz	Mon., May 1 Mon., May 1
15 (May. 1 – May 4)	15: ATP Synthase L54,55,56 M 5/1, T 5/2; Oxidative Phosphorylation Learning Activity W 5/3; Exam 4 Review R 5/4	L53 – L56 Text Ch13	Module 15 Quiz & Survey Text Ch13 Quiz	Mon., May 8 Mon., May 8
Finals (May 8 – 12)	16: A102 Clark: Exam 4 on Gluconeogenesis through ATP Synthase Wednesday, May 10 from 11:50 AM - 1:50 PM or Wednesday, May 10 from 2:00 – 4:00 PM		Exam 4: Lectures 42-56 Post-BC Concept Inventory	Wed., May 10