

BC 351 SCHEDULE: SPRING 2019

All 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. 22 – Jan. 25)	1: Course Overview, Key Concepts, Big Ideas, How to Succeed in BC 351; Cancer Overview; Anticancer Drug Development	L1 – L3	Module 1 Quiz	Mon., Jan. 28
2 (Jan. 28 – Feb. 1)	2: Chemistry of Macromolecules; Bioenergetics; Water; Weak Acids/Bases, Proton Hopping	L4 – L7	Free Energy Pre-Homework Module 2 Quiz Free Energy Post-Homework	Tues., Jan. 29 Mon., Feb. 4 Mon., Feb. 4
3 (Feb. 4 – Feb. 8)	3: Amino Acids; Amino Acid Polymers, Peptides; Peptide Bonds, Protein Primary Structure	L8 – L11	Module 3 Quiz Protein Project (Extra Credit)	Mon., Feb. 11
4 (Feb. 11 – Feb. 15)	4: Protein Secondary Structure; Protein Tertiary and Quaternary Structure	L12 – L14	Exam 1: Lectures 1-11	Tues., Feb. 12
5 (Feb. 18 – Feb. 22)	5: Protein Tertiary and Quaternary Structure; Protein Folding; Intermolecular Interactions (Mb and Hb)	L15 – L18	Protein Folding Pre-Homework Module 4&5 Quiz Protein Folding Post-Homework	Wed., Feb. 20 Mon., Feb. 25 Mon., Feb. 25
6 (Feb. 25 – Mar. 1)	6: Intermolecular Interactions (Mb and Hb); Enzyme Catalysis	L19 – L22	Module 6 Quiz	Mon., Mar. 4
7 (Mar. 4 – Mar. 8)	7: Enzyme Catalysis; Enzyme Kinetics; Transmembrane Transport in Cancer	L23 – L26	Module 7 Quiz	Mon., Mar. 11
8 (Mar. 11 – Mar. 15)	8: Membrane Lipids, Structure and Dynamics; Membrane Protein Structure	L27 – L29	Exam 2: Lectures 12-26	Tues., Mar. 12

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Mar. 16-24	Spring Recess	None	None	None
9 (Mar. 25 – Mar. 29)	9: Transmembrane Transport; Cancer Metabolism; Back to Basics	L30 – L33	Transport Pre-Homework Module 8&9 Quiz Transport Post-Homework	Tues., Mar. 26 Mon., Apr. 1 Mon., Apr. 1
10 (Apr. 1 – Apr. 5)	10: Back to Basics; ATP, Oxidation-Reduction	L34 – L37	Module 10 Quiz	Mon., Apr. 8
11 (Apr. 8 – Apr. 12)	11: Glycolysis – Glucose to Pyruvate; Anaerobic Glycolysis; Pyruvate to Glucose	L38 – L41	Module 11 Quiz	Mon., Apr. 15
12 (Apr. 15 – Apr. 19)	12: Pyruvate to Glucose; Allosteric Enzymes; ATP/ADP Ratios	L42 – L44	Exam 3: Lectures 27-41	Tues., Apr. 16
13 (Apr. 22 – Apr. 26)	13: Metabolic Regulation – Overview, Glycolysis vs. Gluconeogenesis; The Citric Acid Cycle; Citric Acid Cycle Regulation	L45 – L48	Met. Regulation Pre-Homework Module 12&13 Quiz Met. Regulation Post-Homework	Tues., Apr. 23 Mon., Apr. 29 Mon., Apr. 29
14 (Apr. 29 – May 3)	14: Fatty Acid Catabolism; The Electron Transport Chain	L49 – L52	Module 14 Quiz	Mon., May 6
15 (May 6 – May 10)	15: Electron Transport Chain; ATP Synthase	L53 – L56	Module 15 Quiz	Mon., May 13
Finals (May 13 – 17)	Exam 4: Monday, May 13 from 7:30 AM – 9:30 AM		Exam 4: Lectures 42-56	Mon., May 13