Bi214 2016 Lecture Schedule

Week	Date	Topic	Reading
1	Sept. 26	Introduction	
	Sept. 38	**Amino acid chemistry** Amino acid structure	1-11
	Sept. 30	Amino acid structure, continued Ionization of amino acids	12-18
2	Oct. 3	Acid-base properties of amino acids	18-23
	Oct. 5	pH influence on amino acids charges	23-28
	Oct. 7	**Protein shape** Peptide bonds Primary and secondary protein structure	29-37
3	Oct. 10	Secondary and tertiary protein structure; **QUIZ 1**	16; 37-46
	Oct. 12	**Protein function** Hemoglobin structure and function	46-51
	Oct. 14	Cooperativity in hemoglobin	51-56; 72-75
4	Oct. 17	Cooperativity and allostery in hemoglobin	56-61
	Oct. 19	**EXAM 1**	
	Oct. 21	Allosteric effectors in hemoglobin	61-64
5	Oct. 24	**DNA structure, replication, and mutation** Structure of DNA	77-89
	Oct. 26	Structure and replication of DNA	89-99
	Oct. 28	Mechanisms of mutation	100-106
6	Oct. 31	**Defining a gene** Inborn errors of metabolism; **QUIZ 2**	107-108
	Nov. 2	Complementation, definition of the gene	108-113
	Nov. 4	**Transcription and gene regulation in prokaryotes** Transcription in prokaryotes	114-120
7	Nov. 7	Overview of gene regulation in prokaryotes	120-124
	Nov. 9	**EXAM 2**	
	Nov. 11	The *lac* operon of *E. coli*: regulation of protein binding	124-128
8	Nov. 14	Negative regulation of the *lac* operon: Genetic evidence	129-137
	Nov. 16	Negative regulation of the *lac* operon, continued	129-137
	Nov. 18	Positive regulation of the *lac* operon: Genetic evidence	137-140
9	Nov. 21	**Mechanisms of development** Asymmetry in yeast; **QUIZ 3**	141-146
	Nov. 23	Asymmetry in yeast, continued	146-150 Chang and Drubin*
	Nov. 25	**Thanksgiving holiday—no class**	
10	Nov. 28	**Developmental gene regulation in eukaryotes** Overview of gene regulation in eukaryotes	150-154
	Nov. 30	Gene regulation in eukaryotes: The β-globin gene cluster	69-72; 154-158
	Dec. 2	Thalassemias and deregulation of the β-globin genes	75-76; 158-160 Banks*
	Dec. 8	**Final Exam 10:15-12:15**	

*Access via Canvas (Modules>Supplemental Reading and Documents)