Bi214 Lecture & Lab Schedule Summer 2010

Week	Date	Topic	Reading*
1	M 7/19	Introduction; Amino acid structure	EB: 3-10; 24-30, 90-97
		Acid-base properties of amino acids	EB: 34-43; 99
	U 7/20	Peptide bonds; protein structure	EB: 97-98; 103-108
		Thermodynamics of protein folding	EB: 30-34; 108-115
		Lab 1: Structures and Properties of Amino Acids	
	W 7/21	Cooperativity and allostery	EB: 118-122
		Protein function: Hemoglobin	EB: 122-126
	H 7/22	Catalysis by chymotrypsin	EB: 166-191
		Enzyme Kinetics	EB: 198-224
		Lab 2: Cooperativity and Allostery	
2	M 7/26	Energetics and the biochemistry of metabolic pathways	EB: 277-293; 11-14;
		Glycolysis, gluconeogenesis & fermentation	EB: 302-328; 343-344; 348
	U 7/27	Krebs Cycle	EB: 370-392
		Lab 3: Intermediary Metabolism	
	W 7/28	Electron transport and oxidative phosphorylation	
	H 7/29	Oxidative phosphorylation, ATP synthase Photosynthesis	
		Lab 4: Respiration in Yeast	

3	M 8/2	**EXAM I**	
	U 8/3	Inborn errors of metabolism Complementation and the genetics of metabolic pathways	B: 303-305
		Lab 5: Yeast Complementation	
	W 8/4	Review of Mitosis and Meiosis	B: 215-221; 239-244 *Mitosis & Meiosis Demystified* CD
		Review of Mendelian Genetics. X^2 Test	B: 247-255; 271; 276-278
	H 8/5	Recombination and mapping Three point crosses and genetic maps	B: 244-245 B: 272-276
		Lab 6: GCK	
4	M 8/9	DNA structure, replication, transcription and translation in prokaryotes	B: 80-84; 290-294 EB: 53-60; 531-533 B: 309-311 EB: 581; 583-584
	U 8/10	Gene regulation in prokaryotes	B: 347-349
		Lab 7: Transcription and translation	
	W 8/11	Lac operon and catabolite repression	EB: 592-593
		Eukaryotic gene regulation	B: 349-351
		Lab 8: Gene Regulation and the lac operon of E.coli (***Take home*** lab exercise; due at final exam)	
	H 8/12	Review (optional)	
	F 8/13	**Exam II (10:15 – 12:15 AM)**	

EB: *Essential Biochemistry* (Pratt and Cornely)
B: *Biology* ***7th^h edition*** (Campbell and Reece)