

Week	Date	Class	Lab	Reading
1	9/8	Course introduction- <i>Blood-the essence of life</i>		<b>Essential Cell Biology</b> by Alberts, et al 3 <sup>rd</sup> edition
	9/9	Cells and Blood	(1) Problem set workshop during Lab time	Ch 1: 1-7; 10-13
	9/11	Molecules, Bonds, and Structure I. Carbohydrates		Ch 2: 39-54; 58-69; 76-77
2	9/14	Molecules, Bonds, and Structure II. Fats and Membranes	Problem Set 1 Due	54-55; 70-71
	9/16	Molecules, Bonds, and Structure III. Proteins	(2) Exp 1- Seeing Cells	55-56; 72-73
	9/18	Molecules, bonds, and Structure IV. Nucleic Acids		56-57; 74-75
3	9/21	QUIZ 1		
	9/23	Protein Structure - hierarchies	(3) Exp 2 - Molecular Models	Ch 4:119- 140
	9/25	Protein Structure- Mb		140-141; Handouts
4	9/28	Protein Structure - Hb		Handouts; Fig 4-20
	9/30	Protein Function Ligand Binding	(4) Exp 3 – Blood Glucose	148-149
	10/02	Other blood proteins		142;144-145
5	10/05	QUIZ 2		
	10/07	Central Dogma – part I	(5) Central Dogma	231-238
	10/09	Central Dogma – part II		246-247; 250-258
6	10/12	FALL BREAK		
	10/14	Genetic code, Mutation, Variation	(6) Students work on Hb variant	246-247; 250-258
	10/16	Mutation, Germline vs somatic		297-305
7	10/19	QUIZ 3		

	10/21	Gene Expression, regulation	(7) student presentations Hb variants	270-77;280-81 285-86
	10/23	Cell Differentiation, stem cells		711-715
8	10/26	Cancer		717-24(-728)
	10/28	Molecular Profile of a Cell, Microarray Analysis	(8) Exp 5 - Microarray – M5	352-353
	10/30	Cell communication, cell signals		531-543
9	11/02	QUIZ 4		
	11/04	Hormone intro	(9) Exp 6 – Hormones	Ch 16: 531-538
	11/06	Hormones: case studies I		Hand-outs
10	11/09	Hormones: case studies II		Hand-outs
	11/11	Molecular cell signaling – small molecule, peptide	(10) Exp 7 - Oxytocin, Vasopressin	538-539
	11/13	Molecular cell signaling – steroid		
11	11/16	QUIZ 5		
	11/18	Buffering in Blood – Sodium Bicarbonate	(11) Exp 8 - Stomach Acid and Tums	p49-51 p67
	11/20	Acidosis in Blood - Carbonic Anhydrase Lab help		99; handouts
		THANKSGIVING		
12	11/30	Inheritance I		651-55;664-70 673 + top 675
	12/2	Inheritance II	(12) Exp 9- Blood Typing	“
	12/4	Human genome/genetic disorder		handouts
13	12/7	Genetic problems		handouts
	12/9	Review	(13) Meet about topics	
	12/11	Student presentation		
14	12/14	Student presentations		