BICD100 (L.G. SMITH) Syllabus Fall 2011

Date	Lecture Topic	Reading (all from Essentials of Genetics 7th edition, except supplementary readings, which are posted on course website):
9/23	Course intro	Chapter 1 (all)
9/26	Mendel I: principle of segregation	Chapter 3 (Intro, 3.1 – 3.8)
9/28	Mendel II: independent assortment	"
9/30	Meiosis, non-disjunction, polyploidy	Ch. 2 (Intro, 2.2, 2.4 through pg. 27); Ch. 6 (Intro, 6.1 - 6.3)
10/3	Gene structure & regulation	Ch.15 (Intro,15.6,15.8-15.10, 15.12) + Ch.18 (18.9)
10/5	Mutations I	Ch. 4 (4.1, 4.2); Ch. 6 (6.4-6.8); Ch. 14 (Intro, 14.1-14.4, 14.6)
10/7	Mutations II	
10/10	Pedigrees and risk analysis	Ch. 3 (3.9)
10/12	Sex-linked & maternal inheritance	Ch. 4 (4.11, 4.14 thru pg. 82); Ch. 5 (5.2, 5.3, 5.5)
10/14	Extensions to Mendel I	Ch. 4 (Intro, 4.3 -4.10, 4.13 through pg. 77)
10/17	Extensions to Mendel II	"
10/19	Gene mapping I: recombination and linkage	Ch. 7 (Intro, 7.1, 7.2)
10/21	Gene mapping II: molecular markers	Ch. 7 (7.6); Ch. 17 (17.4); Supplement 1
10/24	Gene mapping III: LOD scores	Supplement 1
10/25	**MIDTERM (material thru 10/19) 8:00-10:00 PM**	
10/26	Bacterial genetics	Ch. 8 (Intro, 8.1, 8.2 through pg. 165, 8.4)
10/28	Human genome project and map-based identification of human disease genes	Ch. 18 (Intro, 18.1-18.4) + Supplement 2 + Ch. 19 (pg. 422-424 + 429)
10/31	Population genetics I: Hardy-Weinberg	Ch. 23 (Intro, 23.1-23.3)
11/2	Population genetics II: non-random mating	Supplement 3
11/4	Population genetics III: mutation, selection	"
11/7	Population genetics IV: genetic drift, gene flow, DNA fingerprinting	" + Ch. 19 (19.6)
11/9	Quantitative traits, measuring heritability	Ch. 22 (Intro, 22.1-22.5)
11/11	**VETERANS DAY HOLIDAY (no class)**	
11/14	Quantitive Trait Loci (QTLs)	Ch. 22 (22.6) + Supplement 4
11/16	Complex traits & genomewide association studies	Supplement 4
11/18	Evolutionary genetics	Ch. 23 (23.9, 23.10)
11/21	Forward genetic analysis	Supplement 5 + Ch. 20 (Intro, 20.1, 20.2, 20.4)
11/23	Reverse genetic analysis	" + Ch. 15 (15.12)
11/25	**THANKSGIVING HOLIDAY (no class)**	
	GUEST LECTURES:	
11/28	Telomeres, aging and cancer (Vicki Lundblad, Salk Institute)	Ch. 10 (10.7 + pg. 221)
11/30	Genes and cancer (Clodagh O'Shea, Salk Institute)	Ch. 16 (all)
12/2	Genes & behavior (Ralph Greenspan, UCSD)	Ch. 21 (all)
12/9	**FINAL EXAM** (8:00 – 11:00 AM)	