

BIO 374 Genetics				
Planned Course Outline Fall 2016				
	Date	Day	Lecture Topic	Reading Assignment
1	6-Sep	T	Course Overview	Cha. 1
2	7	W	Central Dogma: DNA structure, replication and expression review	Chapter 1 and Figures from Cha. 7-9
3	9	F	Central dogma review, cont.	
4	12	M	Transmission Genetics (TG)	Cha. 2
5	13	T	TG cont: Probability and Chi square	
6	14	W	TG: Evaluating genetic data, cont.	
7	16	F	TG: Human genetic analysis	
8	19	M	Meiosis and the chromosome theory of inheritance	Cha. 3.2 (pp. 72-81)
9	20	T	Chromosome theory of inheritance/ Morgan paper	Cha. 3.3 (pp.81-86); T. H. Morgan (1910)
10	21	W	Sex-linked inheritance and sex determination	Cha. 3.4-3.6 (pp.86-98); Cha. 15.2 (pp. 521-522)
11	23	F	Sex cont.	
12	26	M	Gene interactions	Cha. 4
13	27	T	<b>NOBEL CONFERENCE-NO CLASS</b>	
	28	W	<b>NOBEL CONFERENCE-NO CLASS</b>	
14	30	F	Gene interactions, cont.	
15	3-Oct	M	Gene interactions, cont.	
	4	T	Linkage: Chromosome mapping	Cha. 5.1 - 5.4 (pp. 144-166); Creighton and McClintock (1931)
	5	W	<b>EXAM 1; NHS 222, 7 PM</b>	
16	7	F	Linkage, cont.	
17	10	M	Linkage analysis in humans	Cha. 5.5-5.6 (pp. 166-171); Case study pp. 177-178
18	11	T	Tetrad analysis	Cha. 5.7 (pp. 171-175)
19	12	W	Bacterial and viral genetics	Cha. 6.1-6.5 (pp. 186-213); 6.7 (pp. 219-221)
20	14	F	Bacterial genetics, cont.	
21	17	M	Bacteriophage mapping	Cha. 6.6 (pp. 213-219)
22	18	T	Molecular basis of recombination	Cha. 12.7-12.8 (pp. 417-423)
23	19	W	Integration of Genetic Approaches	Cha. 10; Gussella (1983)
24	21	F	Integration, cont.	
	24	M	<b>Fall Reading Day</b>	
	25	T	<b>Fall Reading Day</b>	
25	26	W	Mutation and its repair	Cha. 12.1-12.5 (pp. 391-415); Ames, Lee and Durston (1973)
26	28	F	Mutation, cont.	
27	31	M	Mutation, cont.	
	1-Nov	T	Catch up and review	
	2	W	<b>EXAM 2, NHS 222, 7 PM</b>	
28	4	F	Euk. Chromosomes: Changes in number and structure	Cha. 11.4 (pp. 376-384) Cha. 13.1-13.4 (pp. 430-450); Gustavsson et al. (1997)

29	7	M	Euk. Chromosomes: Changes in number and structure, cont.	
30	8	T	Transposable elements	Cha. 13.5-13.7 (pp.450-462)
31	9	W	Transposable elements	
32	11	F	Prokaryotic gene regulation	Cha. 8.2 (pp. 271-278); Cha. 14.1-14.4 (pp. 468-488)
33	14	M	Prokaryotic gene regulation	
34	15	T	Catch up and review	
35	16	W	<b>EXAM 3, NHS 222, 7 PM</b>	
36	18	F	Eukaryotic gene regulation	Cha. 8.3-8.4 (pp. 278-300); Cha. 11.3 (pp. 370-376); Cha. 15
	21	M	Eukaryotic gene regulation	
	22	T	Eukaryotic gene regulation	
	23	W	THANKSGIVING BREAK-Travel Day	
	25	F	THANKSGIVING BREAK	
37	28	M	Analysis of Gene Function: Forward and Reverse Genetics and Recombinant DNA techniques	Cha. 7.5 (pp. 254-263) Cha. 16; Cha. 17
38	29	T	Recombinant DNA techniques, cont.	
39	30	W	Recombinant DNA techniques, cont.	
40	2-Dec	F	Recombinant DNA techniques, cont.	
41	5	M	Genomics and Bioinformatics	Cha. 18; Hattori et al. (2000)
42	6	T	Genomics, cont.	
43	7	W	TBA	
44	9	F	TBA	
45	12	M	TBA	
46	13	T	TBA	
	14	W	Wrap-up/Course evaluations	
	15	R	<b>READING DAY</b>	