

	date	day	lecture	Who?	Text chap
1	Aug 30	Thu	What is life? DNA = transforming principle.	MJ SE	1.1 – 1.3
2	Aug 31	Fri	Lab safety & pipetman use; DNA spooling, models		6.1 – 6.3
3	Sept 4	Tues	Watson Crick model of DNA structure; strand polarity; stick models	SE	paper
4	Sept 6	Thu	DNA replication (paper models); PCR & Sanger sequencing	SE	6.4 – 6.5 6.7 - 6.8
5	Sept 7	Fri	Quiz. 1. Alu PCR- PCR set up. 2. Transforming bacteria with GFP.		
6	Sept 10	Mon	Restriction maps; gel electrophoresis, blots	SE	6.6
7	Sept 11	Tue	St. Louis Police: DNA identification	Guest	
8	Sept 13	Thu	How to clone a gene	SE	10.1 -10.2
9	Sept 14	Fri	1. ALU – Load gel. Quiz. 2. Checking dsRed transformation results. 1. Alu gel results. 3. Cloning yeast- ligation, transformation		
10	Sept 17	Mon	DNA →RNA→protein	SE	1.4, 8.1-8.3
11	Sept 18	Tue	Genetic code	SE	8.6
12	Sept 20	Thu	Translation (prok/euk, splicing)	SE	8.4, 8.5
13	Sept 21	Fri	3. Cloning yeast: plasmid isolation, restriction digest. Quiz. Sequencing set up.		
14	Sept 24	Mon	Reverse genetics	SE	10.4
15	Sept 25	Tue	Genetic engineering	SE	10.5
16	Sept 27	Thu	McCarter (business perspective)	Guest	
17	Sept 29	Fri	3. Cloning yeast: set up, run gel. Quiz. Analysis of sequence data, pooled results		
18	Oct 1	Mon	Proteins and enzymes	SE	handout
19	Oct 2	Tue	Proteins and enzymes	SE	handout
20	Oct 4	Thu	Regulation: lac operon	SE	9.1-9.3
21	Oct 5	Fri	Enzyme activity. Quiz		
22	Oct 8	Mon	Gene regulation in eukaryotes (chrom, RNAi)	SE	3.4, 9.4-9.5
23	Oct 9	Tue	Genome organization, chromosomes	SE	3.5, p 204
24	Oct 11	Thu	How to sequence a genome	SE	Handout, video
25	Oct 12	Fri	Tour of the Genome Sequencing Center. Quiz		
26	Oct 15	Mon	Introduction to genomic approaches	SE	10.3, handout
27	Oct 16	Tue	REPORTS: DNA identity	Students	
28	Oct 18	Thu	Marty Isreal (Fragile X)	Guest	
	Oct 19	Fri	Fall midterm break – no classes		
29	Oct 22	Mon	Asexual reproduction (mitosis)	MJ	3.1-3.3
30	Oct 23	Tue	Sexual reproduction (meiosis)	MJ	3.1-3.3
34	Oct 25	Thu	Rules of inheritance (Mendel) (Reebops)	MJ	2, 5

35	Oct 26	Fri	Yeast cross; sunscreen expt. Quiz		
36	Oct 29	Mon	Recombination & linkage	MJ	4, 5
37	Oct 30	Tue	Complex traits	MJ	15
38	Nov 1	Thu	Mutation and mutagens	MJ	12
39	Nov 2	Fri	Analysis of results: yeast cross & sunscreen. Quiz		
40	Nov 5	Mon	Mutation & DNA repair	MJ	12
41	Nov 6	Tue	Tim Ley (globinopathies)	Guest	
42	Nov 8	Thu	Gene Therapy	MJ	
43	Nov 9	Fri	Intro to bioinformatics. Quiz		
44	Nov 12	Mon	Evolution	MJ	14
45	Nov 13	Tue	DNA variation in humans	MJ	14
46	Nov 15	Thu	Development	MJ	11
47	Nov 16	Fri	Bioinformatics: comparative analysis of DNA sequences, mutation. Quiz		
48	Nov 19	Mon	Development	MJ	11
49	Nov 20	Tue	Development & stem cells	MJ	11
50	Nov 26	Mon	Cancer	MJ	13
51	Nov 27	Tue	Cancer	MJ	13
52	Nov 29	Thu	Cancer	MJ	13
53	Nov 30	Fri	Bioinformatics: protein structure Quiz		
54	Dec 3	Mon	Chef's special	MJ	
55	Dec 4	Tue	Summary: That is life!	MJ	
56	Dec 6	Thr	Paper reports	Students	
57	Dec 7	Fri	Bioinformatics: human disability		
58	Dec 10	Mon	Paper reports	Students	

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