SCHEDULE OF EXPERIMENTS FOR MBioS 402 (Spring)

Week	Dates	EXPERIMENT	Report Due	MEETING TOPIC
1	1/8	Introduction. Handling Pipettors		1/11 Introduction. Writing reports.
	1/10	**Exp. I** DNA isolation, Genomic Spectrophotometric analysis		
2	1/15	DNA isolation, Plasmid both methods		1/18 Discuss DNA isolation results. Restriction map basics.
	1/17	DNA isolation, Plant Spectrophotometric analysis		
3	1/22	**Exp. 2** Restriction Mapping Plan and set up restriction digests.	**Exp 1-- Full 1/25**	1/25 Discuss Restriction Mapping Math in Genetics-1: Log paper.
	1/24	Gel Electrophoresis		
4	1/29	**Exp. 3**, DNA analysis and electrophoresis **Sign up** for competent cell time.		2/1 Discuss DNA analysis Math in Genetics, Dilutions
	1/31	Make competent cells **Sign up** for plate number and antibiotic		
5	2/5	Cell transformation	**Exp 2 R+D 2/8**	2/8 Discuss Transformation Introduce Human Chromosomes
	2/7	Count colonies and calculate transformation efficiency		
6	2/12	**Exp. 4** Human Chromosomes- Karyotyping	**REWRITE 1 2/15**	2/15 Discuss Human Chromosomes Disuss C.elegans
	2/14	**Exp. 5** C. elegans B-gal		Assign Mendelian genetic problems
7	2/19	**Exp. 5**, C. elegans RNAi	**EXP 3 Full**	2/22 Discuss Mendelian genetic

			2/22	problems. Chi Square Problems Discuss analyzing F_1
	2/21	**Exp. 6**, Inheritance of Mutant Traits in Drosophila.	Drosophilia .	Mapping crosses. Introduce PCR
8	2/26	**Exp. 7**, Plant Relationships: rubisco, PCR	**Exp 4 R+D 2/29**	2/29 Discuss gathering F_2 data. Chi Square. Discuss PCR
	2/28	Electrophoresis of rubisco PCR products and plan digests of all eight plants Remove parents from Drosophila crosses,		
9	3/4	Rubisco, restriction digests and electrophoresis	**Exp 5 R+D 3/7**	3/7 Discuss. Chi-square Discuss PCR restriction digests
	3/6	Score Drosophila F_1. Set up F_1 cross		
10	**3/10-3/14**	**HAPPY SPRING VACATION We will remove parents from F_1 Cross**		
11	3/18	Finish Drosophila experiment Count F_2	**Exp 7 R+D 3/21**	3/21 Discuss F_2, Chi-square Introduce Lac Operon
	3/20	Finish Drosophila experiment Count F_2 Get Class data		
12	3/25	**Exp. 8** Plan mutants in the lac operon of E. Coli	**REWRITE 3 3/28**	3/28 Discuss the Lac Operon
	3/27			

		Pour plates (Optional Experiment)		
13	4/1 4/3	Mutants and survival curve Plate mutants. Count colonies		4/4 Discuss survival curves Discuss mutation results Introduce β-gal assay
14	4/8 4/10	Purify mutants. Plan β-gal assay	**Exp. 6 R+D** **4/11**	4/11 Discuss β-gal assay .
15	4/15 4/17	β-gal assay		4/18 Discuss β-gal results Course Evaluation
16	4/22 4/24	DEAD WEEK	**Exp 8 Full** **4/25**	4/25 FINAL MEETING **Final report due**. Equipment return LAB NOTEBOOKS