BIO 510 Schedule – Fall 2002

August 28:	Introduction to lab; check out paraphernalia; lecture on DNA preparations; genomic DNA prep I	
August 30:	Lecture - Enhancers/enhancer trap analysis	
September 2:	Labor Day holiday	
September 4	Genomic DNA prep II	
September 6:	Lecture – Restriction enzymes and analysis; gel electrophoresis; Southern blotting	
September 9:	Genomic DNA prep III; DNA concentration determination; restriction for Southern blot analysis	
September 11:	Agarose gel electrophoresis; EtBr stain/photo; Southern blotting	
September 13:	Lecture - Probe labeling; hybridization; autoradiography; inverse PCR?	
September 16:	Probe labeling; prehybridization/hybridization; restriction for inverse PCR	
September 18:	Blot washing/autoradiography; ligation for inverse PCR	
September 20:	Lecture - PCR; inverse PCR; ligation	
September 23:	Autoradiogram development/interpretation; inverse PCR	
September 25:	Agarose gel analysis/purification of PCR products	
September 27:	Lecture – Bacterial transformation; DNA minipreps and analysis; restriction mapping	
September 30:	Ligation of PCR products with vector; lecture on $-galactosidase histochemistry of flies	
October 2:	Transform bacteria; $-galactosidase staining of fly organs	
October 4:	Academic Holiday	[October 3 or 4: must visit lab to pick colonies]
October 7:	Plasmid minipreps; restriction	
October 9:	Agarose gel analysis of restriction digests	
October 10:	Lecture – DNA sequencing	
October 14:	DNA sequencing I: dideoxy sequencing reactions	
October 16:	DNA sequencing II: gel electrophoresis (load/run/dry/autoradiograph)	
October 18:	Lecture - DNA sequencing; bioinformatics	
October 21:	Autoradiogram develop/interpret	EXAM 1
October 23:	Bioinformatics: BLASTN; FlyBase/BDGP informatics	
October 25:	Lecture –Recovery of DNA; annealing oligonucleotides	
October 28:	Kinase oligos; anneal, ligate oligos; digest recipient plasmd	
October 30:	Recovery of concatemerized oligos; dephosphorylate recipient plasmid	
November 1:	Lecture – oligonucleotide cloning; luciferase activity measurements	
November 4:	Recover oligos; calibrate oligo and plasmid concentrations	
November 6:	Ligate concatemerized oligos into plasmid; mock luciferase assay	
November 8:	Lecture - Transformation, transfection, reporter selection	
November 11:	Transformation of constructs into bacteria	
November 13:	Piic colonies; mock cell line transfection	
November 15:	Lecture - Maxiprep; CsCl preparation of DNA	
November 18:	PCR screening of colonies	
November 20:	Agarose gel analysis of PCR, select positive colonies	
November 22:	Lecture – Making nuclear extracts for promoter analysis	
November 25:	Making maxipreps of constructs	
November 27:	Making maxipreps of constructs	
November 29:	Thanksgiving holiday	
December 2:	Transfection of cell line with constructs	
December 4:	Treat cells with hormone and harvest cells	
December 6:	Lecture - Gel shift analysis of promoter sequences	
December 9:	Luciferase assay of harvested cell lysate	
December 11:	Lab clean up	
December 13:	Lecture - Review	(Last day of class)

December 16, 10:30 AM: EXAM 2