Syllabus for GENE42006200 Fall 2011

Model organisms: overview of genomes
C. elegans - worms as a model organism
C. elegans - genetic analysis of apoptosis
C. elegans - genetic analysis of vulval development
C. elegans - genetic analysis of vulval development: the anchor cell
Drosophila - fruit flies as a model organism
Drosophila - the Heidelberg screen
Exam I (First 7 lectures, 100 Points Dr. Manley)
Yeast: genetics and genome
Yeast: genetics of protein targeting
Yeast: genetics of signal transduction
Yeast: post-transcriptional regulation
Yeast: cell cycle regulation
Yeast: gene expression profiling
Genomics: C-value paradox& gene number (FUGU - compact vertebrate genes)
Exam II (7 lectures, 100 Points Dr. Meagher)
Drosopila - genetic analysis of signaling pathways
Drosopila - Pax6 and selector genes
Mus musculus: mice as a model organism and gene targeting
Mouse - Genetic analysis of Hox genes
Mouse - Mouse models of human cancer
Fall Break
Exam III (6 lectures, 100 Points Dr. Manley)
Danio rerio - Genetics of notochord development in Zebrafish
Arabidopsis - Genetics and Genomes
Arabidopsis - Insertional mutagenesis
Arabidopsis: flower development and RNA interference (RNAi)
Arabidopsis: Chromatin & epigenetics
Thanksgiving Holiday
Arabidopsis Genomics
Exam IV. 6 LecturesMeagher 100 pts
Final Exam (Comprehensive) for GENE6200 students and GENE4200 Honors Students.