

**COS/MOL 551 Syllabus
Fall 2005**

Thurs Sep 15	Introduction to genomics & computational biology Lecturer: Tavazoie Readings: Genomes, chapter 1, Recombinant DNA Ch. 1-3
Tues Sep 20	Sequence alignment & database search Lecturer: Singh Readings: Lecture notes
Thurs Sep 22	Sequence alignment & database search Lecturer: Singh Readings: Lecture Notes
Tues Sep 27	Sequencing & Mapping Lecturer: Tavazoie Readings: Genomes 2-4
Thurs Sep 29	Multiple sequence alignments & profiles Lecturer: Singh Readings: Lecture notes and TBA Problem Set 1 Due
Tues Oct 4	Expression of genetic information Technologies for monitoring transcriptional networks Lecturer: Tavazoie Readings: Recombinant DNA Ch. 4,9 and TBA
Thurs Oct 6	Profiles & motif finding Lecturer: Singh Readings: Lawrence and Reilly, Lawrence et al.
Tues Oct 11	Transcriptional networks: analysis I Lecturer: Tavazoie Readings: TBA
Thurs Oct 13	Transcriptional networks: analysis II Lecturer: Tavazoie Readings: TBA Problem Set 2 Due
Tues Oct 18	Hidden Markov models Lecturer: Singh Readings: Lecture notes
Thurs Oct 20	Phylogenetic reconstruction Lecturer: Singh Readings: Lecture notes
Tues Oct 25	Topics in transcriptional networks Lecturer: Tavazoie Readings: TBA
Thurs Oct 27	Protein Structure I: Secondary structure Lecturer: Singh Readings: Lecture notes and TBA Problem Set 3 Due
Tues Nov 1	Fall Break
Thurs Nov 3	Fall Break
Tues Nov 8	Protein Structure II: Databases, Homology Modelling Lecturer: Singh Readings: Lecture notes and TBA

Thurs Nov 10	Topics in Genetic networks Lecturer: Tavazoie Readings: TBA Preliminary project proposals due
Tues Nov 15	Functional genomics: From genotype to phenotype to fitness Lecturer: Tavazoie Readings: TBA
Thurs Nov 17	Experimental analysis of bi-molecular interactions Lecturer: Tavazoie Readings: TBA
Tues Nov 22	Protein-protein interaction networks: prediction Lecturer: Singh Readings: TBA Project proposals due
Thurs Nov 24	Thanksgiving
Tues Nov 29	Protein-protein interaction networks: analysis Lecturer: Singh Readings: TBA
Thurs Dec 1	Protein-protein interaction networks: analysis Lecturer: Singh Readings: TBA Problem Set 4 due
Tues Dec 6	Networks I Lecturer: Tavazoie Readings: TBA
Thurs Dec 8	Networks II Lecturer: Tavazoie Readings: TBA
Tues Dec 13	Class Presentations
Thurs Dec 15	Class Presentations