

COURSE SCHEDULE**Section I: Genome Structure and Polymorphism – Dr. Freudenreich**

Sept 8	Course Intro	
Sept 10	Lecture	Genome sequencing
Sept 15	Presentation/Discussion	Original paper of Fred Sanger
Sept 17	Presentation/Discussion	New sequencing technologies paper
Sept 22	Lecture	Knockout mouse technology
Sept 24	Presentation/Discussion	Original paper of Martin Evans
Sept 29	Presentation/Discussion	Original paper of Mario Capecchi
Oct 1	Lecture	Summary of Barbara McClintock's papers
Oct 6	Presentation/Discussion	Breakage-fusion-bridge paper
Oct. 8	Presentation/Discussion	Transposons in the human genome paper
Oct 13	no class	

Section II: RNA and Regulation of Gene Expression- Dr. Mirkin

Oct. 15	Lecture	RNA Splicing
Oct. 20	Presentation/Discussion	Original paper of P. Sharp
Oct 22	Presentation/Discussion	Original paper of L. Hood
Oct 27	Lecture	RNA World
Oct 29	Presentation/Discussion	Original paper by T. Cech
Nov 3	Presentation/Discussion	Original paper by L. Gold
Nov 5	Lecture	RNA interference
Nov 10	Presentation/Discussion	Original paper of A. Fire & C. Mello
Nov 12	Lecture	Telomerase, original paper by E. Blackburn

Section III: Molecular Basis of Cancer –Dr. Mirkin and Dr. Freudenreich

Nov 17	Lecture	Oncogenes and tumor suppressors
Nov 19	Presentation/Discussion	Oncogenes, original paper by J. M. Bishop
Nov 24	Presentation/Discussion	Tumor suppressors, original paper by B. Vogelstein
Nov 26	no class	
Dec 1	Lecture	The Cell Cycle
Dec 3	Presentation/Discussion	Original paper of Tim Hunt
Dec 8	Presentation/Discussion	Original paper of Leland Hartwell
Dec 10	Course review, New Nobels	