51410/51170/53035 MOL/BIO/CH 395J MOLECULAR BIOLOGY

TEXTBOOK: Molecular Biology, 4th Edition, by Robert F. Weaver

McGraw-Hill Higher Education; ISBN-13 9780073319940

⌗ Additional reading materials will be assigned.

Time: Tuesday/Thursday 9:30-11:00 AM, Burdine 108

Instructors: Dr. Ian Molineux, Jan. 18 - Mar 10; molineux@mail.utexas.edu

Office Hours: Thu, 11.30am-1.00pm, NMS 1.210

Dr. Rick Russell, Mar 22 - May 5; rick_russell@mail.utexas.edu

Office Hours: Fri, 1-2:30 PM, MBB 2.212AA

Website: http://www.sbs.utexas.edu/395j/

All exams count equally towards the final course grade. Individual exams will not be assigned a letter grade. A single comprehensive make-up exam will be offered only for students who can provide documentation of illness or other non-academic emergency. Cumulative scores will be curved to arrive at the final grade. There are no predetermined cut-off points and no predetermined letter grade quotas. Plus and minus letter grades will be used.

Students with disabilities may request academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 471-6259. Approval letters must be provided to an Instructor before the first exam.

TENTATIVE SCHEDULE (Exam dates are fixed)

Jan 18	DNA/RNA Structure
Jan 20	DNA replication
Jan 25	DNA replication
Jan 27	DNA Repair
Feb 1	Chromatin Structure
Feb 3	DNA Repair
Feb 8	DNA Recombination
Feb 10	Exam 1 (Jan 18-Feb 8 lectures)
Feb 15	DNA Recombination
Feb 17	Transcription mechanisms
Feb 22	Transcription mechanisms
Feb 24	Transcription mechanisms
March 1	Prokaryotic transcription regulation/RNA turnover
March 3	Operons and Regulons
March 8	Operons and Regulons
March 10	Exam 2 (Feb 15-March 8 lectures)

Spring Break: March 15-19

March 23	Eukaryotic transcription machinery
March 25	Eukaryotic transcriptional regulation, chromatin remodeling
March 30	RNA processing: Capping, 3´-end formation, RNA editing
April 1	Pre-mRNA splicing mechanisms, alternative splicing
April 6	Catalytic RNAs: Self-splicing introns and ribozymes
April 8	RNA transport and localization
April 13	Exam 3 (March 9-April 8 lectures)
April 15	Ribosome structure and assembly
April 20	Translation: Initiation and control
April 22	Translation: Elongation and termination
April 27	Eukaryotic RNA turnover
April 29	Functions of ncRNA in gene expression: siRNA, miRNA and others
May 4	Frontiers: identifying and characterizing new ncRNAs
May 6	Exam 4 (April 15-May 4 lectures)