

**Bio 2960 Principles of Biology I: Biomolecules and Molecular Biology
Syllabus for Spring, 2009**

Date	Lecture #	Topic	Lab Activities
1/12 M	1	Course introduction, Trends in biology	
1/14 W	2	Biomolecules	
1/16 F	3	Carbohydrates	Lab 1: Molecules / chemical functional groups (computer)
1/19 M	-	No lecture, MLK day	
1/21 W	4	Lipids	
1/23 F	5	Amino acids & peptide linkages	
1/26 M	6	Protein structure	Lab 2: Amino acid & protein structure; pipettes
1/28 W	7	Protein structure	
1/30 F	8	Enzymes	
2/2 M	9	Cell structure & organization	Lab 3: Enzyme kinetics plus SDS PAGE
2/5 Thursday evening: Exam 1 covering lectures 1-9			
2/4 W	10	Cell structure & organization	
2/6 F	11	Membranes	
2/9 M	12	Cell signaling pathways	Lab 4: Cell organelles, etc. (computer)
2/11 W	13	Cell signaling pathways	
2/13 F	14	Metabolism (glycolysis & fermentation)	
2/16 M	15	Metabolism (oxidative phosphorylation)	Lab 5: Bacterial techniques (streaking, viable cell count)
2/18 W	16	Metabolism (photosynthesis)	
2/20 F	17	Nucleic acid structure	
2/23 M	18	Nucleic acid structure	Lab 6: DNA structure
2/25 W	19	Nucleic acid structure	
2/26 Thursday evening: Exam 2 covering lectures 10-19			
2/27 F	20	DNA replication	Lab 7: DNA gel (REnz mapping)
3/2 M	21	DNA replication	
3/4 W	22	DNA replication	
3/6 F	23	PCR & DNA sequencing (Dr. Kathy Hafer)	

Spring break: 3/7 through 3/15

Date	Lecture #	Topic	Lab Activities
3/16 M	24	Transcription	Lab 8: 16S rRNA PCR & UV mutagenesis
3/18 W	25	Transcription	
3/20 F	26	Transcriptional control	
3/23 M	27	Transcriptional control	Lab 9: Lac operon; PCR sequencing reaction; UV mutagenesis results
3/25 W	28	RNA processing	
3/27 F	29	RNA processing	
3/30 M	30	Translation	Lab 10: Translation / genetic code
4/1 W	31	Translation	
4/2 Thursday evening: Exam 3 covering lectures 20-29			
4/3 F	32	Translation	
4/6 M	33	Recombinant DNA	Lab 11: Cloning I; computer analysis of PCR/sequencing results
4/8 W	34	Recombinant DNA	
4/10 F	35	Genomics	
4/13 M	36	Development	Lab 12: Cloning II: plasmid prep and restriction digest
4/15 W	37	Development	
4/17 F	38	Development	
4/20 M	39	Development	Lab 13: Cloning III: computer analysis of cloning results
4/22 W	40	Immunology	
4/23 Thursday evening: Exam 4 covering lectures 30-39			
4/24 F	41	Immunology	
April 30th, 10:30 AM – 12:30 PM: Comprehensive Final Exam covering lectures 1-41			