Study Guide

Lecture 8 Cloning and stem cells
  Focus on lecture content and slides
  Chapter 39 for reference (all relevant figures are in the lecture slides)
Lecture 9 Genetics and Heredity
  Chapter 9 and 10

Study Guide

Lecture 10
  Chapter 4 for cell structure
  Focus on lecture slides
Lecture 11
  STD’s and viruses
  Focus on lecture slides
  Figures from chapter 34 are in the slides
Study Guide

Lecture 12
Focus on material covered in class
Chapter 16, 17, 18 for additional background
Lecture 13 Biotechnology
http://www.mhhe.com/biosci/genbio/raven6b/graphics/raven06b/other/raven06b_19.pdf

Study Guide

Lecture 14: Insects and Human Disease
Reading: Chapter 20
Lyme Disease
http://www.cdc.gov/ncidod/dvbid/lyme/index.htm
Malaria
http://www.cdc.gov/travel/malinfo.htm
West Nile Virus
http://www.cdc.gov/ncidod/dvbid/westnile/WNVmyths.htm

Lecture 8 Cloning and stem cells
Basic mechanics of how cloning works
somatic cell
Nuclear transfer
Pluripotent
Embryonic stem cell
Haploid
Diploid
Inner cell mass
Endometrium
Uterus
Blastula
Lecture 9 Genetics and Heredity

- Heterozygous
- Homozygous
- Chromosome
- Phenotype
- Genotype
- Autosomal
- X and Y chromosomes
- Basis of male or female phenotype

- Karyotype
- Recombination
- Mutation
- Deletion
- Homologous (homologous chromosome)
- Pedigree
- Basis of inheritance
- Recessive
- Dominant
- Chromosomal disorders

Lecture 10 Cell structure

- Membrane function and characteristics
- Cell membrane
- The Organelles, i.e.
  - Nucleus
  - Nucleolus
  - Endoplasmic Reticulum
  - Golgi body

- Storage organelles
  - Intracellular
  - Extracellular
  - Protein transport

Lecture 11 STD's and viruses

- Chlamydia
- Gonorrhea
- Syphilis
- Trichomonas
- Genital warts (HPV)
- Herpes virus
- HIV/AIDS also impacts nationally and globally
- Drugs for treating HIV
- DNA and Retro viruses, Components and lifecycle
Lecture 12: Evolution

- Genetic equilibrium, rules for 
- Microevolution and Macroevolution
- Speciation
- Allele Frequency
- Natural Selection
- Types of selection
- Allopatric, Sympatric, Parapatric

Lecture 13: Biotechnology

- Type of biotechnology
- Recombinant, R protein, R DNA
- Genetically Modified Organism (GMO)
- Antibody (monoclonal antibody)
- Transgenic
- Gene therapy, Immunotherapy
- Risks and advantages of biotech

Lecture 14: Insects and Human Disease

- Envenomization
- Myiasis
- Disease Cycles and symptoms
- Types of Infectious agents: Protozoans, bacteria, viruses, helminthes, nematodes
- Vector
- Host
- Pathogen
- Infection