Great Ideas of Biology

Dr. Alan Mortimer
Fridays, March 2nd - April 13th (no class March 30th)
10:30 a.m. - 12:30 p.m.
Room 124, Leeds House Building

Week 1: Evolution

- The Big Picture: putting the pieces together
- Darwin and his theory of evolution
- The path of evolution and emergent systems
- Evolution before our eyes

Week 2: The Cell

- History of the discovery of the cell
- Single cell organisms
- Cellular communication and multicellular structures
- Mammalian Cells

Week 3: The Gene, Genetics and DNA

- The idea of gene
- Discovery of DNA and the role of DNA
- Genetics and epigenetics
- Genetic diseases

Week 4: The Infectious Nature of Disease

- The idea of an infectious disease
- Where infectious diseases come from
- How infectious diseases change
- The search for treatment

Week 5: Immunity

- Development of the idea of immunity
- The immune system as we understand it
- The use of the immune system in treatment of disease
- Auto-immune disease
Week 6: Current and Future Issues

- Genetic engineering
- Re-emergent disease
- The body as a whole: systems communication
- The concept of risk
- Anti- ideas