

# E176 Co-evolution of Hosts and Parasites

Winter 2009: Dr. Robin Bush

Tuesday & Thursday 2:00pm - 03:20pm

Engineering Hall 1200. Prerequisite: Bio 97



## HIV, Influenza, MRSA, Hantavirus, West Nile Virus, Malaria

Where do the infectious diseases of humans come from?  
How can we avoid them?  
Why is it so hard to get rid of them?

**These questions can only be addressed by understanding the life styles, ecology and evolutionary processes of the pathogens themselves. We will:**

- Review the basic biology of major human pathogens.
- Learn how pathogens interact with the human immune system.
- Discuss the role of microbes in natural ecosystems, and look at the ways in which changes in human activity have increased the risk of disease.
- Explore the different evolutionary strategies by which pathogens manage to continually infect us, such as the evolution of drug resistance.

### **This course is designed for:**

Premeds who need to understand how microbial evolution and ecology impact the practice of medicine.

Students who are interested in exploring careers in public health and infectious disease outside the role of a primary care physician.

Ecology and evolution majors interested in how pathogens link humans to other organisms and ecosystems.