M460: Microbial Evolution

Spring 2016 – 3 credits – T & Th, 11:15 AM-12:30 PM
Professor Jeff Palmer
Prerequisite: L211 or Permission of the Instructor

Microbes Rule: Evolution, Diversity, & History of Life on Earth

Learn about the exciting revolution underway in our understanding of the evolution, diversity, and fundamental importance of microbial life on Earth

Course topics:

- Microbial diversity: the ubiquity, diversity, and importance of microbial life
- The “Tree of Life”: progress, controversies, and challenges
- Horizontal gene transfer: microbial genomes in flux
- Sex in bacteria: recombination, bacterial “species”, and the pangenome
- Symbiosis: from mitochondria to the human microbiome
- Experimental evolution: using bacteria to study evolution in action
- Origin and evolution of antibiotic resistance
- Evolution of pathogens, parasites, and viruses

It was on a short-cut through the hospital kitchens that Albert was first approached by a member of the Antibiotic Resistance.