

Update Course in Microbiology Spring, 2001

Week 1:

- Introductory lecture and overview of Microbiology
- Classification and types of bacteria (perform Gram staining and view results)
- Review basic microbiological techniques and concepts: sterile technique, pouring plates, streaking and spreading bacteria
- “Environmental” sampling

Week 2:

- Discussion of sampling experiments
- Experiments on effect of hand soap, disinfectants on bacterial growth
- Overview of antibiotics and antibiotic resistance
- Experiments on production of antibiotics (antibiosis) and antibiotic sensitivity

Week 3:

- Discussion of the results of the antibiotic experiments
- Overview of bacterial transformation
- Set up transformation experiments
- Overview of Ames test
- Perform Ames test

Week 4:

- Discuss transformation results and Ames test results
- Discussion of DNA extraction techniques
- Extract chromosomal and plasmid DNA

Week 5:

- Analysis of DNA extraction results using gel electrophoresis
- Introduction and use of Web based tools