

What is 214 all about? (1)

Many physical phenomena of great practical interest to engineers, chemists, biologists, physicists, *etc.* were not in Physics 211 or 212.

Wave phenomena (the first two weeks)

- Classical waves (brief review)
 - Sound, electromagnetic waves, waves on a string, *etc.*
 - Traveling waves, standing waves
- Interference and the principle of superposition
 - Constructive and destructive interference
 - Amplitudes and intensities
 - Colors of a soap bubble, . . . (butterfly wings!)
- Interferometers
 - Precise measurements, e.g., Michelson Interferometer
- Diffraction:
 - Optical Spectroscopy - diffraction gratings
 - Optical Resolution - diffraction-limited resolution of lenses, ...

Interference!

