

Quantum Physics Laboratory

Physics 415, Schedule line number 50278

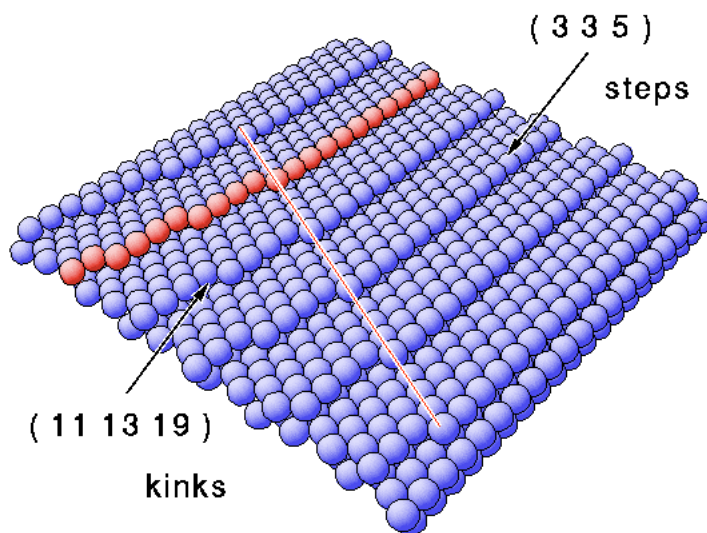
Prerequisite: Modern Physics 303

Course web page: <http://www.wsu.edu/~collins/415-02/>

Meets Tuesday & Thursday 10:35 -11:50 am, Webster 249

+ lab hours arranged at your convenience.

A writing-in-the-major course (M).



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Physics 415 is an advanced undergraduate physics laboratory course appropriate for science majors and beginning graduate students.

Experiments include:

- Detection of beta-rays, x-rays and gamma-rays
- Interactions of radiations in matter. Absorption and scattering
- Elastic scattering of photons and electrons; the mass of an electron
- Diffraction of electron waves.
- Annihilation of positrons (antiparticles of electrons)
- Measuring the ionization energy of hydrogen from x-ray energies
- Studying surfaces at atomic resolution (scanning tunneling microscopy)
- Interaction of nuclear moments with fields in solids (nuclear gamma fluorescence)
- Relaxation times of nuclei in liquids (pulsed nuclear magnetic resonance)

You will learn to present results of your experiments in informal 'round-table' classroom discussions, formal lab reports, poster papers, and short oral presentations using an overhead projector.

For more information contact Professor Gary Collins, 335-1354, collins@wsu.edu.