

# PHYSICS (PHY)

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**PHY 565 Physical Mechanics (3 Credits)**

See department for more information

**PHY 566 Electricity and Magnetism (3 Credits)**

See department for more information

**PHY 580 Quantum Mechanics for Material Science (3 Credits)**

This course covers basic principles, the Schrodinger equation, wave functions, representation of dynamical variables as operators or matrices; bound and continuum states in one-dimensional systems; bound states in central potentials; hydrogen atoms; Perturbation Theory; the interaction of electromagnetic radiation with atomic systems; rotations and angular momentum and applications to solid state systems

**PHY 590 Physics Demonstration (3 Credits)**

See department for more information

**PHY 591 Experimental Concepts in Physics (3 Credits)**

See department for more information

**PHY 653 Solid State Physics (3 Credits)**

This course covers mechanical, thermal, and electric properties of solids; crystal structure; Band Theory; semiconductors; phonons and transport phenomena.

**PHY 675 Electricity and Magnetism (3 Credits)**

This course covers the development of Maxwell's equations; Conservation Laws; problems in electrostatics and magnetostatics; time-dependent solutions of Maxwell's equations; motion of particles in electromagnetic fields; plane waves in dielectric and conductive media; dipole and quadrupole radiation from nonrelativistic systems; Fourier analysis of radiation field and photons, and scattering and diffraction of electromagnetic waves.