

The divisions below assume 27 lecture hours, though this varies quarter to quarter and depending on class time give to exams.

9A

Kinematics, including multidimensional and circular motion: 6 hours

Dynamics/ $F = ma$, including friction and circular motion: 4 hours

Energy, including conservation and nonconservative forces: 4 hours

Momentum, including collisions and center of mass, 4 hours

Rotational Dynamics, including kinematics, angular momentum: 4.5 hours

Equilibrium: 2 hours

Gravitation: 1.5 hours

Oscillations: 1 hour

9B

Waves and Sound: 6 hours

Interference (physical optics), including 2-slit and thin films: 4 hours

Diffraction (physical optics), including 1-slit and multislit/grating: 4 hours

Geometrical Optics, including Snell's Law and lenses: 1.5 hours

Heat and Thermal Topics, including expansion, calorimetry, heat transfer: 3 hours

Gasses, including kinetic theory, equipartition: 1.5 hour

1st Law of Thermodynamics: 2.5 hours

2nd Law of Thermodynamics, including thermal cycles and entropy: 2.5 hours

Fluids: 2 hours

9C

Electric Fields, including continuous charge distribution: 3 hours

Gauss' Law: 3 hours

Electric Potential: 2 hours

Capacitance: 1.5 hours

DC Circuits, including RC circuit: 4 hours

Effects of Magnetic Fields, including torque on dipole: 3 hours

Sources of Magnetic Fields, including Biot-Savart and Ampere's Laws: 3 hours

Electromagnetic Induction: 3 hours

Inductance, including LR circuit: 2 hours

Maxwell's Equations and EM waves: 2.5 hours

9D

Relativity: ~ 7-8 hours

Photons and Basic 1 Dimensional Quantum Mechanics: ~10-12 hours

Multidimensional QM and atoms: ~7-8 hours

Instructor-dependent topics (such as Nuclear, Molecular, Solid-State, Particle Physics): ~4-5 hours