

ISM Advanced Physics Pacing Chart

Text: Giancoli Physics

Week	Topic	Chapter	Lab
1 Aug 22 - 26	Electric Charge, Static Electricity, Coulomb's Law, Charging by Induction, Superposition of Forces	16	
2 Aug 29 – Sep 2	Electric Fields, Gauss's Law, Finding Electric Fields For Different Charge Distributions	16	Using an Electroscope To Detect Charges
3 Sep 5 - 9	Properties Of E Fields In Conductors And Insulators, Linear, Surface, And Volume Charge Density	16	
4 Sep 12 - 16	Electric Potential Energy, Potential, Voltage, Conservative Forces, Potential Energy Functions, Equipotential Lines and Surfaces	17	Mapping Electric Fields On Conductive Paper
5 Sep 19 - 23	Capacitors, Capacitance Of Various Geometries, Capacitor Combinations	17	Building Capacitors
6 Sep 26 - 30	Periodic 1		
7 Oct 3 - 7	Current, Resistance, Ohm's Law, Resistor Combinations, Power	18	Determining The Value of an Unknown Resistor
8 Oct 10 - 14	DC Circuits, Kirchhoff's Laws	19	Measuring Voltage and Current In DC Circuits
9 Oct 17 - 21	Series and Parallel Circuits		Build and Analyze Series and Parallel Circuits
10 Oct 24 - 28	Multi Loop Circuits		
11 Oct 31 – Nov 5	Periodic 2		
12 Nov 7 - 11	RC Circuits, Charging and Discharging Capacitors	19	Plot Voltage and Current Graphs With Logger Pro

13 Nov 14 - 18	Time Constants	19	
14 Nov 21 - 25	Revision/EOT		
1 Term 2 Nov 28 - Dec 2	Magnetism, Motion Of Charged Particles In B Fields, Right Hand Rule	20	Measuring E/m Ratio Of Electrons
2 Dec 5 - 9	Magnetic Fields Produced By Currents, Ampere's Law	20	Measuring B Fields With Logger Pro
3 Dec 12 - 16	B Fields Produced By Current Loops and Solenoids	20	
	Winter Break		
4 Jan 2 - 6	Electric Motors	20	Build An Electric Motor
5 Jan 9 - 13	Periodic 1		
6 Jan 16 - 20	Electromagnetic Induction, Magnetic Flux, Faraday's Law	21	
7 Jan 23 - 27	Induced EMF, Lenz's Law, Dynamic Braking	21	Measuring An Induced EMF With Logger Pro
8 Jan 30 - Feb 3	RL Circuits, RLC Circuits	21	
9 Feb 6 - 10	AC Current, Transformers	21	Measuring Primary vs. Secondary Voltage in a Transformer
10 Feb 13 - 17	Periodic 2		
02/20/24	Revision		
12 Feb 27 - Mar 3	Revision/EOT		
	Spring Break		
1 Term 3 Mar 13 - 17	Maxwell's Equations and EM Waves	Lab: Building a Simple Radio Receiver	
2 Mar 20 - 24	Sources of EM Waves		
3 Mar 27 - 31	EM Spectrum	Demo: Vernier SpectroVis	

4 April 3 - 7	Interference Of Light	Determining the Wavelength of Laser Light Using a Diffraction Grating	
5 Apr 10 - 14	Periodic 1		
6 Apr 17 - 21	Light and Geometric Optics Convex and Concave Lenses	Determining the Focal Length of a Convex Lens	
7 Apr 24 - 28	Mirrors, Telescopes and Microscopes	Building a Simple Telescope	
8 May 1 - 5	Galilean Relativity Special Relativity		
9 May 8 - 12	The Michelson Morley Experiment Einstein is 1905		
10 May 15 - 19	Periodic 2		
11 May 22 - 26	General Relativity		
12 May 29 – June 2	Black Body Radiation Max Plank		
13 June 5 - 9	Quantum Mechanics	Building a Cloud Chamber to Observe Particle Tracks	
14	EOY EXAMS		