Programme of the year:

WB	Chapter	Topic	Content	Notes
14-Aug	1	Vectors, Calculus Concepts of motion	SI Units, Dimensional Analysis Intro to Calculus, Vectors, Vector Multiplication	
21-Aug	2	Kinematics in one dimension	Kinematics with constant/ time-varying acceleration in 1D	
28-Aug	3/4	Vectors and Coordinate Systems Kinematics in two dimensions Applications of kinematics	General motion where x and y vary with time, Kinematics of projectiles, Kinematics of circular motion	
04-Sep	5/6/7	Force and motion Dynamics I: Motion along a line Newton's Third Law	Newton's three laws, free-body diagrams	Mon 4th – Labor Day
11-Sep	8	Dynamics II: Motion in a plane Applications of Newton's Laws	Uniform and non-uniform circular motion Nonconstant friction force Analyzing problems	
18-Sep	9	Work, Energy, and Power	Work by constant force Work by position-varying force Work-energy theorem, Power	Wed – Fri - Interim
25-Sep	10	Interactions and Potential energy Applications of Energy	Energy conservation, Work by nonconservative forces, Potential energy functions Potential energy vs. position graphs	Mon 25th Yom Kippur
02-Oct	11	Impulse and Momentum Applications of Momentum	Impulse-momentum relationship, Conservation of linear momentum, Elastic and inelastic collisions, Position and velocity of center of mass	
9-Oct	11	Impulse and Momentum Applications of Momentum	Applying conservation of momentum	
16-Oct		Fall Break		PT conferences, Fall Break
23-Oct	12	Rotational of a Rigid Body	Kinematics with constant/time-varying angular acceleration. Introduction to torque and angular momentum	
30-Oct	12	Rotational of a Rigid Body	Analysing rotational motion	
06-Nov	12	Rotational Dynamics	Moment of inertia, Newton's laws for rotation, Conservation of energy with rotation, Conservation of angular momentum	Fri 11th - Veteran's Day
13-Nov	12	Translational and Rotational Equilibrium , Applications	Stability	
20-Nov	13	Newton's Theory of Gravity	Kepler's laws, Newton's law of gravitation Energy and angular momentum	Tues 21st - Explorations Wed - Fri - Thanksgiving
27-Nov	15	Oscillations	Kinetics of SHM, Dynamics of SHM	
04-Dec	22	Electric Charges and Forces	Review of the field concept and the definition of the electric field Coulomb's law	
11-Dec	22	The Electric Field	Statics and dynamics of point charges in electric fields	Thur-Fri Exams
18-Dec		Exams		Mon - Tues- exams Wed - Winter break
25-Dec		Winter break		
		Winter break		

AP Physics C Second Semester

WB	Chapter	Topic	Content	Notes
01-Jan	24	Gauss's Law	Electric fields of a uniformly charged rod, circular loop, disk, and sheet	Mon 1st, Tues 2nd – Holiday Wed 3rd – Faculty PD
8-Jan	25	The Electric Potential	The flux concept and Gauss's law Fields of cylinders, spheres, planes, finding charge distribution	
15-Jan	26	Potential and Field	Electric potential, Equipotential lines and surfaces Electric fields as the derivative of the potential	Mon 15th - MLK Day
22-Jan		Applications of Charge and Field	Capacitors and dielectrics	
29-Jan	27	Current and Resistance	Resistivity and resistance Ohm's law and Kirchhoff's rules applied to DC Circuits	
05-Feb	28	Fundamentals of circuits	Equivalent resistance RC circuits	
12-Feb	29	The Magnetic Field	The field concept applied to magnetism Charged particles in magnetic fields, mass spectrometer	
19-Feb		Mon 19th – Faculty PD	Tues/Wed - PT conf	Thurs/Fri - Rodeo break
26-Feb	29	The Magnetic Field	Current-carrying wires in magnetic fields Introduction to and applying the Biot-Savart law	
04-Mar	30	Electromagnetic Induction	Introduction to Ampere's law Introduction to Faraday's Law, Lenz's Law	
11-Mar	30	Electromagnetic Induction	Using Faraday, Lenz, and Ohm to determine the induced emf and the magnitude and direction of an induced current	
18-Mar	30/31	Electromagnetic Induction	Inductance and RL circuits, LC circuits	
25-Mar	32	Electromagnetic Fields and Waves Applications of EMI	Maxwell's equations	Fri 29th – Good Friday
01-Apr		Spring Break		
8-Apr	All	All	Revision/Exam prep	
15-Apr	All	All	Revision/Exam prep	
22-Apr	All	All	Revision/Exam prep	
29-Apr	All	All	Revision/Exam prep	
06-May	All	All	Revision/Exam prep	
13-May	Exams	Tuesday 14th - Mechanics 12 noon	Tuesday 14th - Elec and Mag 2pm	Finals start Thu 16th
20-May	Exams	Study Hall		

* Timings are for guidance only and subject to change.