

Physics for Scientists and Engineers II 2026

53 classes and 4 tests

1/9/26

#	Dates	Read ahead	Topic	Notes
1	Mon 01/12	S3.2,*S3.1,*S3.8	10 Multisource interference: Diffraction	
2	Tue 01/13	S3.3, S3.6, *S3.8	13 Angular resolution, wave and particle models	
3	Wed 01/14	23.6-23.7	12 Effects of radiation on matter: polarization and refraction	
4	Fri 01/16	23.8	6 Geometric optics I: reflection and refraction	
	Mon 01/19	0	Martin Luther King, Jr	
5	Tue 01/20	23.9	6 Geometric optics II: lenses and image formation	
6	Wed 01/21	23.10	15 More image formation	
7	Fri 01/23		10 Exam I: Light waves, optics	
8	Mon 01/26	13.1-13.3	13 The concept of an electric field	
9	Tue 01/27	13.4-13.5	13 C01, Electrical field of a dipole (superposition)	
10	Wed 01/28	13.6-13.7	10 Retardation, relativity, charge motion	
11	Fri 01/30	14.1-14.2	9 What is charge? Interactions	
12	Mon 02/02	14.3	12 Polarization of atoms and molecules	
13	Tue 02/03	14.4-14.5	13 Charge motion in metals, polarization of conductors	
14	Wed 02/04	15.1-15.2	12 Integration of charges: thin rod	
15	Fri 02/06	15.3-15.5	13 Integration over charge distributions	
16	Mon 02/09	15.6,16.9	9 Spherical shells	
17	Tue 02/10	15.6-15.7, 15.9	6 C2 uniform charged rod	
18	Wed 02/11		11 Exam II: electric field and electric potential	
19	Fri 02/13		13 "Electric Potential" is "Electric Potential Energy"/charge	
20	Mon 02/16	16.4-16.5	14 Potential diff. in a non-uniform E field, path independence	
21	Tue 02/17	16.6-16.7	11 Path independence	
22	Wed 02/18	16.8	5 Computation: V from E	
23	Fri 02/20	16.9-16.12	10 Potential difference in an insulator	
24	Mon 02/23	18.1-18.2	10 Electric fields in circuits	
25	Tue 02/24	18.3-18.4	12 Loop rule	
26	Wed 02/25	17.1-17.5	15 Series and parallel circuits	
27	Fri 02/27	19.1-19.2	10 Resistors in series and in parallel	
28	Mon 03/02	19.3-19.5	9 Power in circuits, measurements	
29	Tue 03/03	19.6	9 Capacitors	
30	Wed 03/04	19.7-19.9	11 RC circuits. AC/DC circuits	
31	Fri 03/06	0	11 Exam III	
32	Mon 03/09	17.1-17.5	15 Magnetic field of a current: Biot-Savart	
33	Tue 03/10	17.6-17.7	10 More Biot-Savart	
34	Wed 03/11	17.8-17.10	11 Magnetism in atoms, materials. Quantization	
35	Fri 03/13		Spring break	

	Mon 03/16		Spring break	
	Tue 03/17		Spring break	
	Wed 03/18		Spring break	
	Fri 03/20		Spring break	
36	Mon 03/23	20.1-20.2	11	Magnetic force on a charge, wire
37	Tue 03/24	20.3-20.4	7	E and B force, Hall effect, motional emf
38	Wed 03/25	20.5-20.6	13	Motional emf, magnetic force in a moving ref. frame
39	Fri 03/27	20.7-20.8	10	Torque, potential energy of a magnetic dipole
40	Mon 03/30	20.9	5	Motors and generators
41	Tue 03/31	20.10	12	Dielectric breakdown: sparks in air
42	Wed 04/01	0	1	Computation: cyclotron motion
43	Fri 04/03	0	10	Exam IV
44	Mon 04/06	21.1-21.2	8	Patterns of electric field. Electric flux
45	Tue 04/07	21.4-21.5, 21.8	8	Gauss's law
46	Wed 04/08	21.4-21.5	8	Reasoning from Gauss's law
47	Fri 04/10	21.6-21.7	9	Patterns of magnetic field. Ampere's law
48	Mon 04/13	22.2, 22.10	6	Curly electric fields from time-dep. currents (Lenz's rule)
49	Tue 04/14	22.2	7	Faraday's law, Lenz's rule
50	Wed 04/15	22.3-22.5	9	Faraday's law and motional EMF. Maxwell's equations
51	Fri 04/17	22.6-22.7	11	Inductor circuits
52	Mon 04/20	23.1-23.2, 23.12	4	Application to peculiar circuits
53	Tue 04/21	23.3-23.4, 23.11	12	Maxwell's equations, fields
54	Wed 04/22	23.3-23.4	12	Accelerated charges radiate
55	Fri 04/24	23.5	9	Energy and momentum in radiation
56	Mon 04/27	0	9	Exam V
57	Tue 04/28	S2.1	14	Semiconductors
58	Wed 04/29	0	1	Radiation safety
59	Fri 05/01	0	1	
	Tue, May 05 2026		10:00 am	Final exam, cumulative