Physics 2208: Syllabus and Reading Assignments for Spring 2024

Week	Lecture	Dat	te	Торіс	Reading Assignments	Lab	Sections	HW Due	Quiz
1	1	М	Jan 22	Introduction to P2208; Electricity: Charges and forces	general course information; 20.1				
	2	W	Jan 24	Electricity: electric charge, conductors, insulators, polarization Coulomb's law	20.2 - 20.3	No lab this week	COOP #1, COOP #2	no HW	no quiz
	3	F	Jan 26	Electricity: electric field, field lines, electric field of a point charge and multiple charges	20.4 - 20.5				
2	4	М	Jan 29	Electricity: conductors and electric fields, electrostatic equilibrium, forces and torques in electric fields	20.6 - 20.7	No lab this week	COOP #3, COOP #4	HW 1 on Lec.	
	5	W	Jan 31	Electricity: Gauss' law	Gauss' law supplementary note			1, 2, 3	no quiz
	6	F	Feb 2	Electricity: electric potential energy, electric potential, electric potential and conservation of energy	21.1 - 21.3			(due 2/2)	
3	7	м	Feb 5	Electricity: calculating the electric potential, connecting potential and field, equipotential surfaces	21.4 - 21.6			HW 2 on Lec.	
	8	W	Feb 7	Electricity: capacitance and capacitors, dielectrics, energy density of the electric field,	21.7 - 21.8	Electrostatics	COOP #5, COOP #6	4, 5, 6	Q1 on HW 1
	9	F	Feb 9	Electricity: electric current, Kirchhoff's junction rule, batteries, currents in metals, resistor circuit	22.1 - 22.3			(due 2/9)	on Canvas
4	10	м	Feb 12	Electricity: resistance, resistivity, energy and power	22.4 - 22.6	No lab this week	COOP #7, COOP #8	HW 3 on Lec. 7, 8, 9 (due 2/16) Q2 on HV on Canva	
	11	W	Feb 14	Electricity: DC electric circuits, Kirchhoff's laws, resistors in series and parallel	23.1 - 23.5				Q2 on HW 2
	12	F	Feb 16	Electricity: capacitors in parallel and series, RC circuits, electricity in the nervous system	23.6 - 23.8				on Canvas
5	13	М	Ïeb 19	Magnetism: magnetic fields, magnetic field lines, sources of magnetic fields, magnetic fields due to currents	24.1 - 24.3			(**** / */	
	14	W	Feb 21	Review/ practice for Prelim 1		Electric circuits	prelim prep, COOP #9	no HW	Q3 on HW 3 on Canvas
	15	F	Feb 23	Magnetism: calculating magnetic fields due to currents. Ampere's law	24.4. Ampere's law supplementary note				
6		м	Feb 26	Break	,			HW 4 on Lec.	
	16	W	Feb 28	Magnetism: forces on moving charge in magnetic and electric fields, magnetic force on a current	24.5 - 24.6	No lab this week	COOP #10	10. 11. 12	no quiz
	17	F	Mar 1	Magnetism: magnetic force on dipoles, magnetic materials, energy of magnetic fields	24.7 - 24.8, magnetic field energy supp. note			(due 3/1)	
7	18	M	Mar 4	Magnetism: induced currents, magnetic flux, Lenz's law	25.1 - 25.3			HW 5 on Lec	
	19	W	Mar 6	Magnetism: Faraday's law and applications, inductors and inductance	25.4, inductors and inductance supp. note	Capacitors	COOP #11, COOP #12	13, 15, 16, 17	, Q4 on HW 4
	20	F	Mar 8	AC electricity: AC current, power, transformers, household electricity, electrical safety	26.1 - 26.4			(due 3/8)	on Canvas
8	21	1 M	Mar 11	AC electricity: capacitor circuits, inductor circuits, oscillating (R)LC circuits	26.5 - 26.7			HW 6 on Lec	
	22	W	Mar 13	EM waves: Maxwell's equations, electromagnetic waves, spectrum	25.5 (excluding sections on energy, polarizers), 25.	No lab this week	COOP #13, COOP #14	18, 19, 20	Q5 on HW 5
	23	F	Mar 15	EM waves: Sources, energy, intensity, photon model, polarization and polarizers	25.5 (energy, polarization and polarizers), 25.6			(due 3/15) on Ca	on Canvas
9	24	M	Mar 18	EM waves: propagation of light, 2-source interference	17.1 - 17.2			HW 7 on Lec	
	25	W	Mar 20	EM waves: diffraction gratings, X-ray diffraction	17.3. 28.1	Magnetic fields and induction	COOP #15, COOP #16	21, 22, 23	Q6 on HW 6
	26	F	Mar 22	EM waves: thin-film interference	17.4			(due 3/22)	on Canvas
10	27	M	Mar 25	EM waves: Huygens' principle, single-slit diffraction, circular aperture diffraction, N-slit interference	17.5 - 17.6, N-slit interference supp. note	No lab this week	prelim prep, COOP #17	(*** */ ==/	
	28	W	Mar 27	Review/practice for Prelim 2				no HW	no quiz
	29	F	Mar 29	Bay optics: ray model, reflection, refraction, Snell's law, total internal reflection	18.1 - 18.4				
11	30	M	Apr 8	Ray optics: thin lenses, ray tracing, thin lens equation	18.5, 18.7			HW 8 on	
	31	W	Apr 10	Ray optics: image formation with mirrors, optical instruments (part 1: camera)	18.6. 19.1	Interference and	COOP #18 coop #19	lec 24 - 27 29	Q7 on HW 7
	32	F	Apr 12	Ray optics: Optical instruments (part 2: human eve, magnifier, microscope, telescope, dispersion, resolution)	19.2 - 19.7	diffraction		(due 4/12) on Canva	on Canvas
12	33	M	Apr 15	Quantum physics: photoelectric effect, photons	28.2 - 28.3			HW 9 on Lec	
	34	W	Apr 17	Quantum physics: matter waves, wave-particle duality	28.4. 28.8 (wave-particle duality section only)	No lab this week	COOP #20_coop #21	30 31 32	Q8 on HW 8
	35	F	Apr 19	Quantum physics: energy quantization, particle in a box, energy levels, photon absorption and emission	28.5 - 28.6		0001 1120,0000 1121	(due 4/19)	on Canvas
13	36	М	Apr 22	Quantum physics: Schrödinger's equation, Heisenberg's uncertainty principle, tunneling	28.7, 28.8			HW 10 on Lec	
	37	W	Apr 24	Quantum physics: atomic spectra, guantized atom	29.1 -29.3. 29.5	Lenses and Images	COOP #22, COOP #23	33, 34, 35	Q9 on HW 9
	38	F	Apr 26	Quantum physics: multi-electron atoms, excited states and spectra, stimulated emission, lasers	29.6. 29.7. 29.9	Lenses and images	0001 #22, 0001 #25	(due 4/26)	on Canvas
14	39	м	Apr 29	Nuclear physics: nuclear stucture nuclear stability binding energy fusion fission nuclear force	30 1 - 30 3			HW/ 11 on Lec	O10 on HW
	40	w	May 1	Nuclear physics: radiactive decay, radiation, half-life, activety, applications of nuclear physics	30.4 - 30.6	Spectroscopy	COOP #24 COOP #25	36 37 38	10 on
	40		Marr 3	Particle physics readenice actuary, readening new me, activity, applications of nuclear physics	30.7	эрсскозсору	2001 #24, 000F #25	(due 5/3)	Canvas
15	41	м	May 3	Pariou/prostice for Final Evam	30.7			(uue 5/5)	
12	42	м	may 0	neview/produce for Final EXdIII		No lob this wast	No costion this	TW 12 ON LEC.	11 on HW
						NO IAD CHIS WEEK	NO SECTION THIS WEEK	39,40 (due 5/7)	
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