

PHYS:7729

Plasma Physics II Schedule

Spring 2023

Week	Weekly Reading	Class Meeting	Date	Lecture Notes	HW/Exams
1	GB Chap. 4, Sec. 4.1–4.4 (p.87–137) BS Chap. 6, Sec. 6.1–6.3 (p.197–227)	1	1/17	Lecture #1	
		2	1/19	Lecture #2	
2	GB Chap. 4, Sec. 4.5 (p.137–141) BS Chap. 11, Sec. 11.1–11.2 (p.425–433)	3	1/24	Lecture #3	
		4	1/26	Lecture #4	
3	Prepare for and deliver Cold Plasma Wave Presentations	5	1/31	Lecture #5	HW#1 due 1/31–2/2
		6	2/2	Lecture #6	
4	GB Chap. 7, Sec. 7.3 (p.239–260) BS Chap. 4, Sec. 4.5–4.7 (p.108–130)	7	2/7	Lecture #7	HW#2 due 2/9
		8	2/9	Lecture #8	
5	None	9	2/14	Lecture #9	HW#3 due 2/16
		10	2/16	Lecture #10	
6	Review Lectures #1–10 Review HW #1–3	11	2/21	Midterm #1 Review	Midterm Exam #1
		12	2/23	No Lecture	
7	GB Chap. 9, Sec. 9.1–9.1.1 (p.319–323) GB Chap. 9, Sec. 9.2 (p.328–346) BS Chap. 7, Sec. 7.1–7.3 (p.252–268)	13	2/28	Lecture #11	
		14	3/2	Lecture #12	
8	GB Chap. 9, Sec. 9.3–9.4 (p.346–356)	15	3/7	Lecture #13	HW#4 due 3/9
		16	3/9	Lecture #14	
Spring Break					
9	GB Chap. 9, Sec. 9.1.2 (p.323–328) GB Chap. 9, Sec. 9.5 (p.356–370) BS Chap. 7, Sec. 7.4–7.5 (p.268–277)	17	3/21	Lecture #15	HW#5 due 3/23
		18	3/23	Lecture #16	
10	GB Chap. 11, Sec. 11.1 (p.428–441) BS Chap. 10, Sec. 10.1–10.2 (p.376–388)	19	3/28	Lecture #17	HW#6 due 3/30
		20	3/30	Lecture #18	
11	GB Chap. 2, Sec. 2.2 (p.6–9) BS Chap. 11, Sec. 11.7 (p.453–458)	21	4/4	Lecture #19	HW#7 due 4/6
		22	4/6	Lecture #20	
12	Review Lectures #11–20 Review HW #4–7	23	4/11	Midterm #2 Review	Midterm #2
		24	4/13	No Lecture	
13	Read Barenblatt (2003), p.1–26 Read Taylor (1950a) and (1950b)	25	4/18	Lecture #21	
		26	4/20	Lecture #22	
14	None None	27	4/25	Lecture #23	HW#8 due 4/27
		28	4/27	Lecture #24	
15	Review Lectures #1–24 Review HW #1–8	29	5/2	Lecture #25	
		30	5/4	Final Review	
Finals Week, 5/8–5/12				Final Exam	TBD

Textbooks:

Required: **GB**=Gurnett & Bhattacharjee (2017) *Introduction to Plasma Physics: With Space and Laboratory Applications*

Optional: **BS**=Boyd & Sanderson (2003) *The Physics of Plasmas*