

Tentative Schedule (Draft 5)						
	Date	Pre-Class Reading	Unit	Topics	HW	Due
M	1/12	Bellan 1.1-7, 1.12	0	Introduction		
WF	1/14,16			No Class – Paul Out		
M	1/19			MLK Holiday – No class		
W	1/21			No Class – Paul Out		
FM	1/23,26	Bellan 2.2, 2.4	1	Phase Space Fundamentals	#1	1/28 (W)
WF	1/28,30	Bellan 2.3	2	Vlasov Equation	#2	2/4 (W)
FMW	1/30,2/2,4	Bellan 2.5.1	3	Solutions to Vlasov Equation	#3	2/13 (F)
FM	2/6,9	Bellan 2.5	4	Derivation of Fluid Equations		
WF	2/11,13	Bellan 4.1, 4.2, 4.2.1	5	Linear waves I (Unmagnetized Plasmas) – Fluid Theory	#4	2/23 (M)
MW	2/16,18	Bellan 5.3.1		Linear waves I (Unmagnetized Plasmas) – Vlasov Theory		
WF	2/18,20,	Bellan 5.3.2, 5.3.3, 5.3.4		Linear waves I (Unmagnetized Plasmas) – Landau Theory (Derivation, Physics	#5	3/6 (F)
MWF	23,25,27			of Landau Damping, Energy and Entropy Considerations)		
MW	3/2,4			Plasma Dispersion Function	#6	3/13 (F)
WF	3/4,6	Bellan 5.3.4, 5.3.5, 5.3.6				
FMW	3/6,9,11,13	Bellan 8.1, 8.2	6	Linear Waves II (Magnetized Plasmas) – Theory, Fluid Limits, Bernstein waves, Cyclotron Resonance	#7	3/30 (M)
F						
MWF	3/16,18,20	<i>Don't forget the project!</i>		Spring Break – No class		
MWF	3/23,25,27,	Handout (Goldston & Rutherford 23.4, 25.1)	7	Velocity space instabilities – Bump-on-Tail, Two Stream (Buneman), Velocity Anisotropy Instabilities	3-27	drop day
M	30					
MT	3/30,31,	Bellan 8.6.3	8	Drift Waves, Universal Instability, Drift-kinetic equation	#8	4/8 (W)
WF	4/1,3					
MTW	4/6,7,8,	Bellan 1.8, 1.9, 2.4.1	9	Collisions I – collision rates, Coulomb log; Boltzmann Equation, collision operators, H-theorem, Chapman-Enskog, Braginskii	#9	4/20 (M)
MT	13,14					
F	4/10			Easter Recess – No class		
TWF	4/14,15,17	Bellan Chpt. 13	10	Collisions II - Fokker-Planck, Landau Equation, Dreicer field		
MWF	4/20,22,24	Bellan Chpt. 14	11	Wave-particle interactions, Quasi-linear theory		
MWF	4/27,29,5/1	Bellan Chpt. 15	12	Wave/wave interactions, Manley Rowe		
F	5/1			Course evaluations		
W	5/6			Project Presentation (11a-1p)		