Physics 603 Tentative Schedule Spring 2022

Lecture	Date	Topic	Pages	HW due
1	11-Jan	Review of Mechanics	1-12	
2	13-Jan	Constraints and Lagrange's Equations	12-20	
3	18-Jan	Forces of constraint, v-dependent Potentials	20-31	
4	20-Jan	Hamilton's Principle, Lagrange Multipliers	34-45	HW1
5	25-Jan	Hamiltonians II	45-54	
6	27-Jan	Conservation Theorems	54-68	HW2
7	1-Feb	Central Force Problem: General	70-87	
8	3-Feb	Central Force Problem: Kepler	92-102	
9	8-Feb	Oscillations	238-247	
10	10-Feb	Oscillations II	250-258	HW3
11	15-Feb	Rotations: Matrices and Euler Angles	134-154	
12	17-Feb	Finite and infinitesimal rotations	155-171	HW4
13	22-Feb	**Midterm Exam**		
14	24-Feb	Vector rotation, Coriolis force	171-182	
15	1-Mar	Angular momentum and Inertia tensor	184-198	HW5
16	3-Mar	Rigid Body rotation	198-208	
		Spring Break		
17	15-Mar	Precession and Nutation	208-223	HW6
18	17-Mar	Hamilton Equations of Motion	334-347	
19	22-Mar	Variational Principles	353-363	
20	24-Mar	Phase Space and Liouville Theorem	419-421	HW7
21	29-Mar	Canonical Transformations	368-381	
22	31-Mar	Symplectic Approach	381-388	HW8
23	5-Apr	Poisson Brackets	388-408	
24	7-Apr	Selected Topics: Continuum Mechanics	558-566	HW9
25	12-Apr	Special Theory of Relativity	276-297	
26	14-Apr	Relativity: Forces + Collisions	297-309	HW10
27	19-Apr	Relativity: Lagrangian Formulation	312-324	
28	21-Apr	Relativistic Hamiltonian, E&M	349-353	HW11
	4-May	**Final Exam 12:30-3:30**		