Classical Mechanics II

Physics 411

August 27th 2007

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Office hours:		Monday, Friday 11 a.m. – 5 p.m.
		Tuesday, Thursday 4–5 p.m.

Text: D'Inverno, Ray. *Introducing Einstein's Relativity.* Third edition, Prentice Hall, 1999.

Other Resources:

http://academic.reed.edu/physics/courses/Physics411/html/411

http://arxiv.org – particularly "gr-qc" section. References to the arxiv have the form: "gr-qc/0508101".

Grading:

Problem sets will be handed out on Fridays at 5 p.m., due the following Friday by 5 p.m. Homework will make up 75% of the grade, a comprehensive final, both written and oral, will make up the remaining 25%.

Late Homework Policy: Late homework will not be accepted except with prior notification of appropriate circumstances.

Week	Date	Topic
1	8/27 8/29 8/31	Classical Orbits – Lagrangian Form
2	9/5 9/7	Classical Orbits – Hamiltonian Form
3	9/10 9/12 9/14	Tensors and Parametrization
4	9/17 9/19 9/21	(Special) Relativistic Mechanics
5	9/24 9/26 9/28	Curved Space/time
6	10/1 10/3 10/5	Einstein's Equations Introduction to Field Lagrangians
7	10/8 10/10 10/12	
Fall Break		
8	10/22 10/24 10/26	Vector Field Theory (E&M)
9	10/29 10/31 11/2	Tensor Field Theory (GR)
10	11/5 11/7 11/9	Solving Einstein's Equations (Schwarzschild)
11	11/12 11/14 11/16	(General) Relativistic Motion for Schwarzschild
12	11/19 11/21	Gravitational Radiation
13	11/26 11/28 11/30	Kerr Geometry
14	12/3 12/5	Relativistic Strings