Syllabus for PHY 321 Fall semester, 2016

Title : Classical Mechanics I

Official Description : Newtonian point particles. Oscillations. One-particle chaos. Central-force motion. Systems of particles.

Prerequisites : (PHY 184 or equivalent) and (MTH 234 or equivalent, completed or concurrently)

Instructor : Prof. Daniel Stump

Textbook : J. C. Taylor, Classical Mechanics (required)

Grading :   3 hour exams = 45%   [Fri Oct 7; Fri Nov 4; Mon Dec 5]
Final Exam = 25%   [Wed Dec 14 12:45 – 2:45 pm]
Quizzes = 5%
Homework Problems = 25%

Homework : There will be a weekly assignment of problems taken from the textbook. The assignment should take approximately 10 hours. You may work with other students, but you may not copy solutions from other students; *just write your own solutions in your own words*. Homework must be handed in in class on the due date.

Computer problems : Some of the assigned problems will require solutions by computer. Use *Mathematica* for these problems. *Mathematica* is available in most MSU microcomputer labs, e.g., 106 Farrell Hall or 1210 Anthony Hall.

Schedule of lectures :

1/ Aug 31 - Sep 2	Chap 1	8/ Oct 17 - Oct 21	Chap 4
2/ Sep7 - Sep 9	Chap 1	9/ Oct 24 - Oct 28	Chap 5
3/ Sep 12 - Sep 16	Chap 2	10/ Oct 31 - Nov 4	Chap 5
4/ Sep 19 - Sep 23	Chap 2	11/ Nov 7 - Nov 11	Chap 6
5/ Sep 26 - Sep 30	Chap 3	12/ Nov 14 - Nov 18	Chap 7
6/ Oct 3 - Oct 7	Chap 3	13/ Nov 21 - Nov 23	Chap 8
7/ Oct 10 - Oct 14	Chap 4	14/ Nov 28 - Dec 2	Chap 8
		15/ Dec 5 - Dec 9	Chap 8