

## Syllabus for PHY 321 Fall semester 2017

**Title :** Classical Mechanics I

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

**Prerequisites :** (PHY 215 or concurrent) and (MTH 235 or concurrent) or equivalent.

**Instructor :** Prof. Daniel Stump; office : 3222 B.P.S. Building

**Textbook :** J. R. Taylor, Classical Mechanics (required)

**Grading :** 3 hour exams = 40% [ Fri Oct 6 ; Fri Nov 3 ; Mon Dec 4 ]  
Final Exam = 25% [ Tue Dec 12 @ 12:45 – 2:45 pm ]  
In Class Work = 10%  
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. Or, you can get a free license to install Mathematica on your laptop, from the MSU Computer Lab.

### Schedule of lectures :

1/ Aug 30 - Sep 01	Chap 1	9/ Oct 23 - Oct 27	Chap 5
2/ Sep 06 - Sep 08	Chap 1	10/ Oct 30 - Nov 03	Chap 5
3/ Sep 11 - Sep 15	Chap 2	11/ Nov 06 - Nov 10	Chap 6
4/ Sep 18 - Sep 22	Chap 2	12/ Nov 13 - Nov 17	Chap 7
5/ Sep 25 - Sep 29	Chap 3	13/ Nov 20 - Nov 24	Chap 8
6/ Oct 02 - Oct 06	Chap 3	14/ Nov 27 - Dec 01	Chap 8
7/ Oct 09 - Oct 13	Chap 4	15/ Dec 04 - Dec 10	Chap 8
8/ Oct 16 - Oct 20	Chap 4		