

# Physics 211: Mechanics Syllabus – Spring 2017

## ***Instructor:***

Malcolm Sanders  
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Office: Cook A512  
Office Hours: MW 2:30 PM - 3:30 PM, or by arrangement

## ***Time & Location:***

MWF 9:40 AM - 10:30 AM in Cook A402

## ***Textbook:***

John R. Taylor, *Classical Mechanics* Second Edition, University Science Books, ISBN 978-1-891389-22-1 (2005)

## ***Outline:***

We will cover the material from the first 11 Chapters in Taylor's book at a rate of approximately 1 chapter each week. Topics will include: Newtonian Dynamics, Oscillations, Gravitation, Energy Methods, Calculus of Variations, Lagrangians, Central Forces, Systems of Particles and motion in non-inertial reference frames

## ***Grading:***

- Weekly assignments & Quizzes 40%
- Midterm exam 20%
- Final exam 40%

## ***Important Dates:***

*Midterm* – Wednesday, March 7, 8:30 AM - 10:25 AM in Cook A402

*Final exam* – TBA in Cook A402

## ***Policies & Expectations:***

- *Homework* – Assignment problems will be mostly from the textbook and will be assigned (nearly) every week on a Friday, to be due the following Friday at the beginning of class. The homework will cover material discussed in class that week. **No late homework will be accepted.** The goal of the homework problems is for you to convince me that you understand the material and have mastery of the concepts and techniques that have been discussed in lecture. Please write your solutions as neatly as possible, and limit your conversations with other students to general procedures and problem solving strategies. Some Fridays, the homework assignments will be collected and graded. Other Fridays, there will be an open-book quiz based around one of the homework problems.
- *Attendance* – We will move at a fairly rapid pace and it will be difficult for you to make up for missed time; attendance at all classes is *strongly* encouraged.

## **Physics 211: Mechanics Homework – Spring 2017**

Assignment 01: Due 01/27/16 (Friday)

Taylor: 1.10, 1.19, 1.21, 1.23, 1.39, 1.44, 1.45 & 1.48

Assignment 02: Due 02/3/16 (Friday)

Taylor: 2.2, 2.6, 2.11, 2.41, 2.44

Assignment 03: Due 02/17/16 (Friday)

Taylor: 3.4, 3.10, 3.11, 3.18, 3.21 & 3.33

Assignment 04: Due 03/3/16 (Friday)

Taylor: 4.2, 4.9, 4.12, 4.23, 4.36, 4.38, 4.39 & 4.43

Assignment 05: Due 03/24/16 (Friday)

Taylor: 5.2, 5.4, 5.13, 5.23, 5.37, 5.41, 5.44, & extra credit: 5.49

Assignment 06: Due 03/31/16 (Friday)

Taylor: 6.4, 6.9, 6.11, 6.20, 6.22 & 6.25

Assignment 07: Due 04/7/16 (Friday)

Taylor: 7.8, 7.15, 7.20, 7.22, 7.31, 7.37 & 7.41

Assignment 08: Due 04/14/16 (Friday)

Taylor: 8.2, 8.9, 8.12, 8.13, & 8.22

Assignment 09: Due 04/21/16 (Friday)

Taylor: 9.14, 9.20, 9.26, 9.28, & 9.33

Assignment 10: Final Exam Review

Taylor: 11.5, 11.14, 11.16, & 11.26