

PHYSICS 7200: Advanced Mechanics

COURSE OUTLINE: WINTER 2017

<i>LECTURER:</i>	Professor J. M. Wadehra
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<i>OFFICE HOURS:</i>	Tuesdays and Thursdays between 10:00 and 11:00 AM or by appt.
<i>TEXT:</i>	Classical Mechanics by H. Goldstein (Addison – Wesley)
<i>MEETING PLACE:</i>	Tu and Th from 11:30 AM to 12:45 PM in Room 185, Physics

1. EXTRA READING.

The assigned text covers all the material for this course. A few reference books that can be consulted usefully are:

<i>Mechanics</i> by L.D. Landau and E.M. Lifshitz	(Pergamon Press)
<i>Theoretical Mechanics of Particles</i> by A.L. Fetter and J.D. Walecka	(McGraw Hill)
<i>Mechanics</i> by F. Scheck	(Springer-Verlag)
<i>Theoretical Mechanics</i> by E. N. Moore	(John Wiley and Sons)

You may wish to refer to these books for additional reading about topics which interest you.

2. HOMEWORK ASSIGNMENTS.

A few problems from the text and from other sources will be assigned almost every week. You are expected to work out these assignments *independently* and turn in the solutions for grading by the due date. Late homework assignments will not be accepted.

3. EXAMS AND GRADING.

Your grade in the course will be determined, as follows, by your performance in three exams and in solutions of assigned homework problems:

First Hourly Examination	100 points
Second Hourly Examination	100 points
Final Examination	200 points
Homework	<u>100 points</u>
TOTAL	500 points.

Tentative dates for hourly exams are Thursday, February 9 and Thursday, March 23; these exams will be held in the classroom. Results of the hourly exams as well as the graded homework problems will be handed back in the class. The final exam will be on Tuesday, May 2, from 10:15 AM to 12:15 PM in room 185 of Physics Research Building. The final exam will cover all the material of this course;

however, there will be slight emphasis on material not covered by the first and the second hourly exams.

4. LEARNING OBJECTIVES/OUTCOMES

At the successful completion of this course, you will have an appreciation of the role played by the concepts of classical mechanics in developing quantum mechanics. This course will provide you new insights of connections between the classical mechanics and the quantum mechanics.

5. TOPICS TO BE COVERED.

I anticipate that we will be covering most of the topics in the textbook during this semester.