# PHYS 419 – Fall 2005

## Classical Mechanics I

### Lecture course outline

<table>
<thead>
<tr>
<th>Lecture hours:</th>
<th>Mon., Wed., &amp; Fri.: 10:10 AM – 11:00 AM</th>
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<tbody>
<tr>
<td>Lecture room:</td>
<td>109 SHL</td>
</tr>
<tr>
<td>Instructor:</td>
<td>Krzysztof Szalewicz, 121 SHL, phone: 831 6579, <a href="mailto:szalewic@udel.edu">szalewic@udel.edu</a></td>
</tr>
<tr>
<td>Office hours:</td>
<td>one hour after class or by appointment</td>
</tr>
<tr>
<td>Teaching assistant:</td>
<td>Ozan Sargin, 227 SHL, phone: 831 6538, <a href="mailto:osargin@udel.edu">osargin@udel.edu</a></td>
</tr>
<tr>
<td>Office hours:</td>
<td>Mon.: 3:00-3:30 PM, Wed.: 3:00-4:00 PM, Thur.: 4:30-6:00 PM</td>
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</tbody>
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### Text:


### Supplementary Texts:


### Background Texts:

- D. Halliday, R. Resnick, and J. Walker (or K.S. Krane) *Fundamentals of Physics*, Wiley 1993 or later

### Advanced Texts:


### Corequisite:

- MATH 302

### Exams and quizzes:

- Quizzes (10-20 minutes) every Friday, except for exam weeks
- Exam 0 (50 minutes) Sep. 09
- Exam 1 (50 minutes) Oct. 10
- Exam 2 (50 minutes) Nov. 11
- Final exam (2 hours) after Dec. 8

### Homework:

- Up to 10 problems each week. Normally assigned on Friday, due the next Friday, returned by the following Friday.

### Grading:

- Quizzes: 25%
- Exam 0: 5%
- Exam 1: 20%
- Exam 2: 20%
- Final exam: 30%

Grades will be *approximately* assigned as follows:

- A – 0.7 and above, F – below 0.2, each 0.05 is one increment.
All problems will be graded on a scale 0 to 10.

Homework 0 and Exam 0 are intended to advise you about the background required to do well in this course. These will consist of questions from classical mechanics at the level of PHYS207, Fundamentals of Physics I. Exam 0 will be returned to you before the drop/add date.

Other exams will be from the material covered in this course. Three types of problems can be expected. (a) Problems or questions related directly to the material covered in class (note that derivations and proofs are an essential part of this course and will be required on exams). (b) Problems very similar to actual homework problems (therefore it is critical that you spend time to understand solutions deposited in the library if you have not solved the homework problems perfectly by yourself). (c) Problems related to the material covered, but not necessarily similar to any homework problem.

Exams 1 and 2 will deal with the course material covered in the weeks preceding the exam (exam 2 will not repeat subjects contained in exam 1). The final exam will embrace the whole course with emphasis on subjects not covered by exams 1 and 2. All exams and quizzes will be closed book. Each exam will contribute to your final grade as the ratio of the number of points earned to the maximum number of points, weighted as listed above. The quizzes will contribute as an analogous ratio multiplied by the weight given above.

Homework will be collected, read, and returned, but not graded. There will be a quiz on each day the homework is due with one problem very similar to the problems of the just submitted homework. There will be no quizzes on exam weeks.

Although homework will not be graded, it is obligatory. If homework or a part of it is not submitted or is turned in but does not show a reasonable amount of effort, the final grade will be lowered as follows. If more than 15% of solutions will be missing or showing unsatisfactory effort, the final grade will be lowered by one step (e.g., from A to A−). Each consecutive missing 15% lowers the grade by one more notch (if no homework is returned, A will be changed to C, and similarly for other grades).

Detailed solutions to homework and exam problems will be put on reserve in the physics library. Everybody is strongly advised to compare these solutions with their work.

I will communicate with you by email. Let me know if you are not getting my emails.