

**Physics 135-1**

**Syllabus**

**Spring 2018**

**Instructor:** David Taylor      Dear 11      d-taylor2@northwestern.edu      491-2053  
**Tutor:** Wei-Ting Lin      Dear 14      WeiTingLin2014@u.northwestern.edu  
**Textbook:** Fundamentals of Physics, Extended 10<sup>th</sup> edition, Halliday, Resnick, & Walker  
**Web Site:** <http://courses.physics.northwestern.edu/Phyx135-1/>

<b>Date</b>	<b>Reading</b>	<b>Lecture Topic/Events</b>
Tue, Apr 3	2.1 – 2.5	Speed and Acceleration
Wed, Apr 4	4.1 – 4.7	2D and 3D Motion
<b>Thu, Apr 5</b>		<b>No Quiz</b>
Fri, Apr 6	5.1 – 5.3	Newton's Laws of Motion
Mon, Apr 9	5.1 – 5.3	How Force Works
Wed, Apr 11	6.1	Friction
<b>Thu, Apr 12</b>	<b>Tue 4/03 – Mon 4/09</b>	<b>Quiz #1</b>
Fri, Apr 13	6.2 – 6.3	More About Newton's Laws
Mon, Apr 16	7.1 – 7.6	Work, Kinetic Energy
Wed, Apr 18	8.1 – 8.5	Potential Energy
<b>Thu, Apr 19</b>	<b>Wed 4/11 – Mon 4/16</b>	<b>Quiz #2</b>
Fri, Apr 20	9.1 – 9.3	Conservation of Momentum
Mon, Apr 23	9.4 – 9.8	Collisions
Wed, Apr 25	9.9	Rockets
<b>Thu, Apr 26</b>	<b>Tue 4/03 – Mon 4/23</b>	<b>Midterm I</b>
Fri, Apr 27	10.1 – 10.4	Rotation
Mon, Apr 30	10.5 – 10.6	Rotational Inertia
Wed, May 2	10.7 – 10.8	More Rotation
<b>Thu, May 3</b>	<b>Wed 4/25 – Mon 4/30</b>	<b>Quiz #3</b>
Fri, May 4	11.1 – 11.3	Rolling
Mon, May 7	11.4 – 11.8	Angular Momentum
Wed, May 9	11.9	Gyroscopes
<b>Thu, May 10</b>	<b>Wed 5/02 – Mon 5/07</b>	<b>Quiz #4</b>
Fri, May 11	12.1 – 12.2	Static Equilibrium
Mon, May 14	12.3	Elasticity
Wed, May 16	13.1 – 13.5	Gravitation
<b>Thu, May 17</b>	<b>Wed 4/25 – Mon 5/14</b>	<b>Midterm II</b>
Fri, May 18	13.6 – 13.7	Orbital Theory I
Mon, May 21	13.6 – 13.7	Orbital Theory II
Wed, May 23	13.8	Einstein and Gravity
<b>Thu, May 24</b>	<b>Wed 5/16 – Mon 5/21</b>	<b>Quiz #5</b>
Fri, May 25	14.1 – 14.5	Fluids I

Mon, May 28	Memorial Day	
Wed, May 30	14.6 – 14.7	Fluids II
<b>Thu, May 31</b>	<b>Wed 5/23 – Wed 5/30</b>	<b>Quiz #6</b>
Fri, June 1	15.1 – 15.6	Harmonic Motion
Mon, June 4	15.4	The Physical Pendulum
	Tue, 6/05 – Fri, 6/08	Reading Week
<b>Tue, June 12</b>	<b>Final Exam, 3 – 5 pm</b>	

**Course Grade:** Quizzes (16%) (best 5 out of 6)  
 Pop-Up Quizzes (8%) (best 6 out of 7)  
 Midterm I (18%)  
 Midterm II (18%)  
 Final (40%)

### Quiz Information

There is no quiz in the first week. After that, quizzes are every Thursday except on April 26 and May 17 when we will enjoy midterm exams instead. The lectures covered by each quiz are given in the second column above. The quizzes will typically contain one or two problems, and these will be similar to the assigned homework for the lectures.

I drop the lowest quiz score. This is so everyone can miss a quiz for any reason, from a wedding to the year-end clearance sale on humming bird food at Petco. This is *not* an entitlement. It is not a free drop *in addition* to another for your wedding or the clearance sale on humming bird food at Petco. Your reason for missing one quiz is exactly the reason that this drop covers. If illness or other issues mean that you will miss multiple quizzes, please feel free to discuss it with me.

As a rule, it is assumed that students will attend every lecture. I will not take formal attendance, but I will give what I call “Pop-Up quizzes” about once a week. The Pop-Ups are little quizzes that I will announce *the night before* by email, mainly so that you will know you really do need to come to class. The Pop-Ups will cover the assigned reading for that day, plus whatever I discuss in the lecture. They will be handed out at the start of class and collected at the end. In between, you can fill them out at your leisure as I lecture on the material covered by the Pop-Up. As with the Thursday quizzes, I will drop your lowest Pop-Up.

### Other Information

Note that students in Phyx 135-1 must also register for Physics Lab 136-1. I am not directly associated with Phyx 136-1. All questions about the lab should be addressed to the faculty lab instructor, Dr. Arthur Schmidt (aschmidt@northwestern.edu).

I don't use Blackboard or Canvas. Everything I post for the class on-line will be at:  
<http://courses.physics.northwestern.edu/Phyx135-1/>

### How To Make A Good Grade In My Class

Do all the homework. Come to all the lectures. Read all the assigned pages in the textbook. In my classes, the homework problems are recycled into the quizzes, and the quizzes are recycled into the exams. If I talk about it in class, then it is approximately 9944 times more likely to be on an exam than if I don't. Do the homework. Don't skip class. Read the book.