Course Description: Mechanics for students in science and engineering. This is the first semester of a two-semester sequence in introductory physics. Topics covered include Newton’s Laws, the concepts of energy and work, conservation of energy and momentum, rotational motion, gravity, and simple harmonic motion.

Course Objectives:
Conceptual knowledge to gain: Understanding of the physical laws of motion, static and dynamical Newtonian mechanics, and harmonic motion; the scientific approach.  
Skills to gain: Learning to think more critically/scientifically, and developing the skills need to attack difficult problems.

Instructor: Prof. Alexei Safonov  
Office: MIST 319  
E-mail: safonov@tamu.edu (please start subject line with PHYS218)  
Class times: Lectures MW 4:10-5:25 pm, MPHY 203, plus one weekly Recitation/Lab section.  
Office hours: TBA in MIST 319. If overlaps with another class, email me for an appointment.  
FlipItPhysics course access key: e5ff3a3d

Web Pages:
- physics218.physics.tamu.edu – website with information common to all PHYS 218 sections using the ‘University Physics’ textbook  
- ecampus.tamu.edu site for this class will have lecture notes and grades  
- pearsonmylabandmastering.com - Mastering Physics (register through ecampus.tamu.edu) for homework submission  
- www.flipitphysics.com for pre-lectures and checkpoints  
- www.webassign.net/tamu/login.html for the labs

Co-requirement: MATH 151 or 171. You must have a working knowledge of plane geometry, trigonometry, and algebra. As the semester progresses you will also be expected to have a working knowledge of derivatives and integrals, and be proficient in the use of vectors (addition, subtraction, dot and cross products).

Text and required materials:

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<tr>
<th>Primary text</th>
<th>Volume 1, University Physics, Young and Freedman 14th edition. From the TAMU bookstore you can buy the loose-leaf book or the bound book. The version bundled with Modified MasteringPhysics access include access to Mastering Homework. Your more economic option is the loose-leaf book. Do NOT get the LAB book.</th>
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</thead>
<tbody>
<tr>
<td>Homework (Mastering)</td>
<td>All 218 sections use the ModifiedMastering on-line homework system. You do not need a course access code; you should go to eCampus, login with your net id and password, and click the link on the left menu under &quot;Homework (Mastering)&quot;. which will be linked with the correct course automatically.</td>
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<tr>
<td>Clicker</td>
<td>Get the iClicker2 from your bookstore. The iClickers will be used for in-class conceptual testing and polling. To encourage class participation, credit for iClickers will be based in part on participation, as well as additional points based</td>
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</tbody>
</table>
on correct answers. To gain participation credit you must pre-register your device, and answer all of the questions in class. Cheating by bringing a friend’s clicker is a violation of the Aggie Honor Code, and will result in loss of all clicker points, and disciplinary action.

To register the iClicker, follow the instructions given here. Please direct all technical issues with the support team at iclicker.com.

Pre-Lectures (FlipItPhysics)
All 218 sections use the http://www.flipitphysics.com on-line pre-lecture system (formerly known as SmartPhysics). Follow the instructions to setup your login and subscribe to my course using the course access key described in the first page of this document. The FlipItPhysics website will allow you to subscribe without paying for the first 30 days. DO NOT BUY THEIR BOOK.

You are required to view the prelectures (narrated slides including a few online questions) ahead of the lectures, and the lectures will include quizzes to see if you have gained a basic understanding. The remainder of the lecture will then focus more on problem-solving. The FlipItPhysics site also includes “Checkpoints” following most pre-lectures, which are short quizzes to test for understanding.

Labs (WebAssign)
All 218 sections use the WebAssign on-line laboratory system. Follow the instructions to setup your login. By following the WebAssign link above (notice the link's ending in tamu/login.html) and login in with your TAMU netid the system will take you to the section that they are registered for and they can join the course. Some of you already gotten WebAssign access for your math class, but you do need to also have an access code for your physics work. After subscription the webAssign website will allow you 14 days of grace before actually paying.

Calculator
You also should have a pocket calculator capable of calculating arithmetic and trigonometric functions for exams.

Laboratory: The Lab is a part of this course, not treated as a separate grade. The Lab Schedule is posted on the web-page. The labs, along with pre- and post-lab assignments, will be obtained through the online WebAssign package. Note that you must attend Recitation each week, even if no lab experiment is scheduled (see the Lab Schedule for details). The policy for absences in Lab and Recitation is the same as for the exams, and you must consult first with your TA in the case that you have an excused absence. If you have taken 218 previously and would like to transfer your lab grade, you must have achieved >90% in the labs last time, and fill out a lab-grade transfer form no later than Jan 29th.

Homework and Recitation: Homework assignments are posted online from links that are posted in the eCampus course site. You are responsible for completing and understanding these problems in preparation for exams. By the end of the first week you should complete the first homework assignment.

You must work the online problems on your own, and keep up with the deadlines--see the MyLab&Mastering site for posted due dates. Late submissions are accepted, however full credit will not be given. The penalty is –2% per hour past the deadline. To encourage doing the homework (which is necessary to succeed in the course!), the maximum penalty—no matter how late—is –50%. Details about the grading policy for individual homework problems can be found on the online site—for example, in some cases you get several attempts to key in the correct answer, with a 3% penalty for wrong attempts.

Exams: We will have 3 midterm exams and one comprehensive final exam, all of which are common to all 218 sections. Each of these will be given in the evenings as listed in the course schedule when you registered. The midterm exams start at or around 7 pm, and are expected to last 1.5 hours. The final exam is the Friday before finals week and will last 2 hours. Exams generally consist of problems similar in content and difficulty to the
homework, and they are expected to include both multiple-choice and free response questions. Formula sheets will be provided for each exam. You only need to bring your TAMU ID, a pen/pencil and hand-held calculator. Any contestations regarding the grading of an exam must be brought to my attention within 1 week of the exams being returned to the class.

Absences: If you miss an exam due to an authorized excused absence as outlined in the University Regulations (Rule 7.1.6.2a is not acceptable), you should attempt to contact me prior to the exam but no later than the end of the week of the missed exam to arrange for a way to make up the score. Although some instructors may provide a make-up exam, I will instead raise the relative weighting of your other exams to compensate any test missed due to a University-excused absence. Note: Few conditions qualify as an authorized excused absence, so you must avoid missing exams except for extremely serious circumstances.

Identification: You must bring your TAMU student ID with you to all exams for identification purposes.

**Course Grade:**
All of components contributing to your final grade are common across all sections of 218 (same tests/labs/recitation quizzes/etc.), except for the clicker quizzes. The overall course grade is weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Midterm Exam 1</td>
<td>13%</td>
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<tr>
<td>Midterm Exam 2</td>
<td>13%</td>
</tr>
<tr>
<td>Midterm Exam 3</td>
<td>13%</td>
</tr>
<tr>
<td>Comprehensive Exam</td>
<td>25%</td>
</tr>
<tr>
<td>Laboratory</td>
<td>10%</td>
</tr>
<tr>
<td>Recitation Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Online homework</td>
<td>8%</td>
</tr>
<tr>
<td>Prelectures and Checkpoints</td>
<td>4%</td>
</tr>
<tr>
<td>In-class clicker quizzes</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>100%</strong></td>
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**ADA Policy:** The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call (979)845-1637. For additional information visit [http://disability.tamu.edu](http://disability.tamu.edu). All information and documentation concerning a disability is kept confidential.

**Honor Code:** The Aggie Honor Code states, “An Aggie does not lie, cheat, or steal or tolerate those who do.” Further information regarding the Honor Council Rules and Procedures may be found on the web at [http://aggiehonor.tamu.edu](http://aggiehonor.tamu.edu).