PHYS 1425 Syllabus - Spring 2010

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| **Class #** | **Date** | **Day** | **Text Sections** | **Topic** |
| 1 | Jan 20 | W | 1 | Introduction, measurement, estimation |
| 2 | Jan 22 | F | 2(1-6) | One-dimensional motion |
| 3 | Jan 25 | M | 2(6-9) | One-dimension motion |
| 4 | Jan 27 | W | 3(1-6) | Projectile motion, vectors |
| 5 | Jan 29 | F | 3(7-9) | Projectile motion, vectors |
| 6 | Feb 1 | M | 4(1-5) | Newton's laws of motion |
| 7 | Feb 3 | W | 4(6-8) | Weight, tension, free body diagrams |
| 8 | Feb 5 | F |  | No class - snow |
| 9 | Feb 8 | M | 5(1) | Friction |
| 10 | Feb 10 | W | 5(2-6) | Circular motion, more complicated motion |
| 11 | Feb 12 | F | 6(1-5) | Gravitation, applications, maybe Kepler's law |
| 12 | Feb 15 | M | 6(5-8) | Kepler's law, gravitational fields, review, catchup |
| 13 | Feb 17 | W |  | **Exam I, Chs. 1-5** |
| 14 | Feb 19 | F | 7(1-3) | Review exam, work |
| 15 | Feb 22 | M | 7(3-4) | Work, work-energy principle |
| 16 | Feb 24 | W | 8(1-4) | Conservative and non-conservative forces, potential and mechanical energy |
| 17 | Feb 26 | F | 8(5-9) | Conservation of energy |
| 18 | Mar 1 | M | 9(1-5) | Linear momentum, collisions |
| 19 | Mar 3 | W | 9(6-10) | Collisions, center of mass, rockets |
| 20 | Mar 5 | F | 10(1-3) | Rotational motion |
|  | Mar 6-14 |  |  | Spring Break, no class |
| 21 | Mar 15 | M | 10(4-7) | Torque, rotational dynamics |
| 22 | Mar 17 | W | 10(8-10) | Rotational kinetic energy |
| 23 | Mar 19 | F | 11(1-3) | Angular momentum |
| 24 | Mar 22 | M | 11(3-6) | Angular momentum and torque for rigid objects and system of particles |
| 25 | Mar 24 | W | 11(6-9) | Conservation of angular momentum, tops, gyroscopes, rotating frames |
| 26 | Mar 26 | F | 12 | Statics |
| 27 | Mar 29 | M |  | Catchup, revise syllabus, snow day, review?? |
| 28 | Mar 31 | W |  | **Exam II, Chs. 6-11** |
| 29 | Apr 2 | F | 13(1-7) | Go over Exam II, Fluids |
| 30 | Apr 5 | M | 13(8-14) | Buoyancy, Bernoulli equation, applications |
| 31 | Apr 7 | W | 14(1-4) | Buoyancy, simple harmonic motion |
| 32 | Apr 9 | F | 14(5-8) | Pendulum, damped and forced harmonic motion |
| 33 | Apr 12 | M | 17(1-5) | Temperature |
| 34 | Apr 14 | W | 17(6-10) | Ideal gas law |
| 35 | Apr 16 | F | 18(1-4) | Kinetic theory of gases |
| 36 | Apr 19 | M | 18(5-7), 19(1-2) | Van der Waals, heat |
| 37 | Apr 21 | W | 19(3-7) | Specific and latent heat, first law of thermodynamics |
| 38 | Apr 23 | F | 19(8-10) | Heat transfer |
| 39 | Apr 26 | M | 20(1-4) | Second law of thermodynamics |
| 40 | Apr 28 | W |  | **Exam III, Chs. 12, 13, 14, 17-19** |
| 41 | Apr 30 | F | 20(5-8) | Entropy |
| 42 | May 3 | M | 20(9-11) | Statistical interpretation, thermal pollution, course review |