

**PHYS-170A (HONORS) FALL-2014---MORSE---DETAILED COURSE OUTLINE---version 1.0 (05/29/2014)**

| <i>week</i> | <i>day</i> | <i>2014 Date</i> | <i>Lec #</i> | <i>Reading due</i> | <i>Lecture</i>                            | <i>Mastering Physics problem set assigned</i>            | <i>HW due</i> |
|-------------|------------|------------------|--------------|--------------------|---|--|---------------|
| 1           | Mon        | Aug 25           | #1           | 1.1-6              | Units, Standards                          | #1: Chap. 1, Units; Chap. 2, 1-d motion                  |               |
|             | Tues       | Aug 26           | #2           | 1.7-10             | Vectors, Vector Components                |  |               |
|             | Wed        | Aug 27           | #3           | notes              | Mathematics, Useful Theorems              |  |               |
|             | Fri        | Aug 29           | #4           | 2.1-3              | 1-Dimensional Motion                      |  |               |
| 2           | Mon        | Sep 01           | ***          |                    | <b>LABOR DAY Holiday</b>                  |  |               |
|             | Tues       | Sep 02           | ***          | hw #1              | HW #1                                     | #2: Chap 2; Chap3, 2, 3-d motion.                        | #1            |
|             | Wed        | Sep 03           | #5           | 2.4-6              | Constant Acceleration--Gravational Forces |  |               |
|             | Fri        | Sep 05           | #6           | 3.1-3              | 2 and 3-Dimensional Motion                |  |               |
|             |            |                  |              |                    |   |  |               |
| 3           | Mon        | Sep 08           | #7           | 3.4-5              | Circular Motion                           | #3: Chap 4, Newton's Laws                                | #2            |
|             | Tues       | Sep 09           | ***          | hw#2               | HW #2                                     |  |               |
|             | Wed        | Sep 10           | #8           | 4.1-3              | Forces, Newton's Laws                     |  |               |
|             | Fri        | Sep 12           | #9           | 4.4-6              | Mass and Weight                           |  |               |
| 4           | Mon        | Sep 15           | #10          | 5.1-2              | Newton's 1st and 2nd Laws                 | #4: Chap 5, Applying Newton's Laws; Chap 6, Work, Energy | #3            |
|             | Tues       | Sep 16           | ***          | hw#3               | HW#3                                      |  |               |
|             | Wed        | Sep 17           | #11          | 5.3-5              | Friction Forces, Circular Motion          |  |               |
|             | Fri        | Sep 19           | #12          | 6.1-2              | Work, and Energy                          |  |               |
| 5           | Mon        | Sep 22           | #13          | 6.3-4              | Kinetic Energy                            | #5: Chap 6, Kinetic Energy; Chap. 7, Potential Energy    | #4            |
|             | Tues       | Sep 23           | ***          | hw #4              | HW #4                                     |  |               |
|             | Wed        | Sep 24           | #14          | 7.1-2              | Gravitational Potential, Potentials       |  |               |
|             | Fri        | Sep 26           | #15          | 7.3-5              | Forces and Potential Energy               |  |               |
| 6**         | Mon        | Sep 29           | #16          | 8.1-3              | Momentum and Impulse                      | #6: Chap 8, Momentum; Chap. 9, Angular Moementum         | #5            |
|             | Tues       | Sep 30           | ***          | hw #5              | HW #5                                     |  |               |
|             | Wed        | Oct 01           | #17          | 8.4-6              | Elastic Collisions, Center of Mass        |  |               |
|             | Fri        | Oct 03           | #18          | 9.1-3              | Angular Velocities and Accelerations      |  |               |
| 7           | Mon        | Oct 06           | #19          | 9.4-6              | Rotational Energy                         | #7: Chap. 9; Chap 10, Torque, Work                       | #6            |
|             | Tues       | Oct 07           | ***          | exam-1             | <b>Exam -I</b>                            |  |               |
|             | Wed        | Oct 08           | #20          | 10.1-3             | Torques, Force Moments, Angular Accel.    |  |               |
|             | Fri        | Oct 10           | #21          | 10.4-5             | Work, Energy, Rotational Motion           |  |               |
| 8           | Mon        | Oct 13           | #22          | 10.6-7             | Angular Momentum                          | #8: Chap. 10; Chap. 11 Equilibrium, Statics              | #7            |
|             | Tues       | Oct 14           | ***          | hw#6,7             | HW #6,7                                   |  |               |
|             | Wed        | Oct 15           | #23          | 11.1-3             | Equilibrium, Center of Gravity            |  |               |
|             | Fri        | Oct 17           | #24          | 11.4-5             | Stress and Strain, Elasticity             |  |               |
| 9           | Mon        | Oct 20           | #25          | 14.1-3             | Simple Harmonic Motion (SHM)              | #9: Chap 13, Periodic Motion, Oscillators                | #8            |
|             | Tues       | Oct 21           | ***          | hw #7,8            | HW #7,8                                   |  |               |
|             | Wed        | Oct 22           | #26          | 14.4-6             | Energy in SHM Oscillators                 |  |               |
|             | Fri        | Oct 24           | #27,27a      | 14.7-8             | Damped Oscillators, Shock Absorbers       |  |               |

