

2012 - 13 Dublin Jerome High School AP C Physics - Mechanics and KAP

Mrs. Barb Hilligoss

E-Mail: hilligoss_barb@dubilinschools.net

Voice Mail #: 614-760-4422 (email preferred)

Mechanics Course Syllabus

Topic	Estimated time	Text Reference	Labs & Demos
Newtonian Mechanics Motion in 1D, 2D, projectile motion, relative motion	2 - 3 weeks	Chapters 2-4	Measurement (direct & indirect); constant vs accelerated motion; motion sensors; determine range of projectile, relative velocity
Newton's Laws of Motion, Vectors	2 - 3 weeks	Chapter 5	Finding coefficient of friction; force table; Atwood machine; coffee filter lab
Work, Energy, Power	1 - 2 weeks	Chapters 7, 8	Energy in springs; conservation of energy
Center of Mass; Impulse/momentum; Collisions	1 - 2 weeks	Chapter 9	Finding COM of irregular objects; Linear momentum conservation
Circular motion and rotation; torque	2 - 3 weeks	Chapters 10 & 11	Fc lab; Torque lab;
Rotational kinematics and dynamics; angular momentum	2 - 3 weeks	Chapter 11	Moment of inertia demo (spinning disk, bike wheel)
SHM, mass on a spring, pendulums	2 weeks	Chapter 15	Factors affecting period of a pendulum; finding spring constant (Hooke's Law)
Newton's Law of Gravity, orbits of planets and satellites	1 week	Chapter 13	Lab - The Orbit

Web sites for you to use:

<http://www.khanacademy.org/>

Super site for reviewing Calculus and Physics topics.

<http://www.freemathhelp.com/calculus-help.html>

This is also a great place to review your trig, geometry, stats,

http://www.collegeboard.com/student/testing/ap/physics_c/samp.html?physicsc

Free response questions from previous C tests.

Lots of videos on YouTube.