

**Topic List for Exam #1  
(not exhaustive)**

**Physics 105 – Acoustics**

**Friday, June 15, 2007**

one dimensional kinematics

instantaneous clock reading & position number  
displacement, time interval  
average velocity, acceleration, & jerk – slopes of lines connecting two points  
instantaneous velocity, acceleration, & jerk – slopes of tangent lines  
 $x$  vs  $t$ ,  $v$  vs  $t$ ,  $a$  vs  $t$ ,  $j$  vs  $t$  – and graphical “translations” between them

force

Aristotelean Laws of Motion: natural state at rest (A1L),  $v$  proportional to  $F/R$  (A2L)  
Newtonian Laws of Motion: Law of Inertia (N1L),  $F = ma$  (N2L), action-reaction (N3L)

work and energy

work done by a constant force  
force of gravity, force of spring  
potential energy of springs and potential energy of gravity  
kinetic energy of translation

lab content – concepts explored in the laboratory exercises may also be included on the exam

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