Chapter 4 - Weight + friction

- mass
- weight
- inertia
- calculating weight: $F_g = mg$
- friction - static/kinetic: $F_f = \mu F_N$
- FBDs!

Chapter 5 - Newton's Laws

1. Law of Inertia
2. $F_{net} = ma$
3. Action-Reaction ($\vec{F}_{A\,on\,B} = -\vec{F}_{B\,on\,A}$)

Kinematics $\xleftrightarrow{a}$ dynamics

FBD's!

towing problems

apparent weight

$\vec{p} = m\vec{v}$ (mom)

$\vec{J} = \vec{F}\Delta t$ (imp)

Also

$\vec{J} = \Delta\vec{p}$ (imp-mom)

$\vec{F}\Delta t = m\Delta\vec{v}$

§5-4 Impulse + Momentum

~~Forces at angles in §5-2.~~