

# PHYSICS 160 READING

## ASSIGNMENT FOR MARCH 29

### SECTIONS 8.3-8.5

Please notice that this file is two pages long.

#### **8.3 - Momentum Conservation and Collisions**

- All collisions conserve momentum.
- We classify collisions as to whether they also conserve kinetic energy.
- A collision may not conserve kinetic energy if there is heat produced.
- Elastic collisions conserve momentum and kinetic energy.
- Inelastic collisions only conserve momentum.
- when the colliding objects stick to each other, the collision can never be elastic. This is why we call these completely inelastic.

#### **8.4 - Elastic collisions**

- This section mostly discusses the condition for a one-dimensional elastic collision.
- There are infinitely many ways for a two-dimensional elastic collision to occur.

## 8.5 - Center of Mass

- I think this topic is better understood after we've done chapter 10, so please read this now to get an idea of what we mean by center of mass. We'll discuss it in lecture, though, when we get to chapter 10.