

# PHYSICS 160 READING ASSIGNMENT FOR APRIL 17 SECTIONS 10.5 TO 10.7

## 10.5 - Angular Momentum

- Angular Momentum,  $\vec{L}$  - The rotational counterpart to momentum.
- Here, we tend to be very careful. Linear momentum,  $p$ , is what we studied in chapter 8. Angular momentum,  $L$ , is what we are studying in chapter 10.
- Angular momentum being the rotational counterpart to linear momentum mostly boils down to fact that the change in the angular momentum is equal to the torque. In other words for linear momentum:  $\frac{dp}{dt} = F$ , for angular momentum:  $\frac{dL}{dt} = \tau$ .
- There are slightly different equations for a particle and for a rigid body.

## 10.6 - Conservation of Angular Momentum

- Like linear momentum, the angular momentum will be conserved in many cases.
- Unlike linear momentum, angular momentum can be conserved for a single object.