In Class:

Hardware Demo of a Digital PID Controller

Watch the changes in the P, I, and D gains for a real motor.

https://www.youtube.com/watch?v=fusr9eTceEo&feature=em-subs_digest-vrecs

Controlling Self Driving Cars **4:40** PID EXAMPLE

https://www.youtube.com/watch?v=4Y7zG48uHRo

More Advanced

MATLAB TECH TALKS

Good Series for Intuitive Understanding 7 PARTS

Understanding PID Control, Part 1: What is PID Control? 11:42 DRONE EXAMPLE

From the series: Understanding PID Control

Brian Douglas

https://www.mathworks.com/videos/understanding-pid-control-part-1-what-is-pid-control--1527089264373.html

Understanding PID Control, Part 2: Expanding Beyond a Simple Integral 10:42

From the series: Understanding PID Control Used Drone as example

https://www.mathworks.com/videos/understanding-pid-control-part-2-expanding-beyond-a-simple-integral-1528310418260.html

Understanding PID Control, Part 3: Expanding Beyond a Simple Derivative

From the series: Understanding PID Control Noise control and Filtering

https://www.mathworks.com/videos/understanding-pid-control-part-3-expanding-beyond-a-simple-derivative-1531120808026.html

See also Parts 4 and 5 for more advanced concepts – tuning, modeling, etc.