

Combining Full-State Feedback with an Observer

- ▶ So far, we have focused on autonomous systems ($u = 0$).
- ▶ What about nonzero inputs?

$$\dot{x} = Ax + Bu$$

$$y = Cx$$

— assume (A, B) is controllable and (A, C) is observable.

- ▶ In the next lecture, we will learn how to use an observer together with estimated state feedback to (approximately) place closed-loop poles.

