Part 1 Read Section 10.1 and skim the rest of Chapter 10 in the textbook.

Part 2 Think of an idea for your design project. Ideally, your system should have a single variable to control, a single sensor, and a single actuator. Keep it simple. (You may add “stretch” goals to your project, but have a SISO milestone that demonstrates your design.)

Part 3 Write up a description for your idea for your design project. The proposal should be approximately one page long. The proposal must address the following questions:

1. What is the application? What is the overall system?
2. What is the plant? What is the input actuating signal and what is the output variable to be controlled? How will you model the plant, and where can you find more information about the plant? Direct analysis? Manufacturer’s data sheet? Published literature? Measurements of the system in lab?
3. What will you use for the sensor?
5. What references can you turn to in order to find more information about this system and this application? Include at least three references to published materials in a refereed or edited venue (that is, books, papers, or articles).
7. Is this an individual or team project? If it is a team project, who is your partner?