Tasks for this week:

Learn the block diagram and vocabulary of a basic RF/analog system, from antenna to audio output. This quarter we will break up that block diagram into individual blocks and circuits, divide up the tasks, design and build a working system.

Study Material: Quickly read through Chapters 10 and 11 of Gray, Meyer et al. We will use some basic noise fundamentals in this class. Don’t get bogged down with details, particularly in Chapter 11.

Homework--Technical Interview Questions:

1. Starting with a blank sheet of paper. Draw the block diagram of a heterodyne receiver, from antenna to audio output.

2. Starting with a blank sheet of paper. Pick one block of the above receiver and draw a component level circuit of what’s inside.

Using the Textbook and other resources--Layers of the Onion metaphor.

Read: Quick overview of material to acquire basic understanding
Study: Understand the basic concepts, math models, and expressions
Practice: Do the homework problems
Reference: Create new circuits using the text material as reference

Midterm exam date:

In Class February 24. Closed book, no notes, no calculators. Note, this is a very late exam, and covers all to the lecture material in the class. By the middle of February we will be working on our contributions to the class project.

Final class project. We will design and build individual contributions to the block diagram receiver. The final report will be a 4 page description, including design strategy, circuit details, measured results, and integration into the complete class project, with field testing. There will be as many blocks as students in the class, and they may be interconnected LEGO fashion into different receivers.