In this lab you'll start learning about spectrograms and their role in analyzing signals. Later in the course, we'll get more deeply into the theory, user choices, and tradeoffs associated with spectrograms. For now, some of the terminology (e.g. window length, DFT length, etc.) might seem mysterious, but I think it's useful to play around with the stuff through some structured exercises that the book's authors have put together.

The posted Lab S-7 and Lab S-8 documents from the *DSP First* companion Web site allow you to observe spectrograms in the context of chirping signals and AM/FM signals, respectively. You'll need to complete only a few of the exercises in the handouts, but I recommend that you read the other material in the handouts, particularly the Pre-Lab stuff, to enhance your understanding of the material.

You may work on the labs anytime before or during your lab period. Your lab TA will check during your lab period to make sure you've completed the required exercises. I anticipate that some of you might end up completing all the required stuff ahead of time and showing up to lab just to get checked off, and that's fine.

You may download the *DSP First* toolbox by clicking here. From that toolbox, this lab uses only the function `plotspec`, about which you can learn more from Section 3.3 of the Lab P-4 document from Lab 2.

Lab 3 requires that you perform the following tasks:

- Complete Sections 2.1-2.2.1 in the Lab S-7 document. You may ignore 2.2.1(d) if you like.
- Complete Sections 2.1-2.2.2 in the Lab S-8 document.

The `mychirp.m` function that you wrote for Lab 2 might prove useful. Note that the Pre-Lab sections of the Lab S-7 and Lab S-8 documents start you off with blocks of code for you to complete. Going through those might also prove useful.