COEN 45
Winter Quarter, 2011
Homework #4
Due Tues Feb 1

In this homework you will create a number of function files. Write a main script, `hw4.m`, that exercises each one in turn. Submit printouts of the main script, your function files, and all results.

All function files must have help text at the beginning and an input check as exemplified below. See `help nargchk` for explanation of this check.

- Chapter 7, problem 6.
- Chapter 7, problem 9. Your function (file name `invest.m`) should start like this:

```
function M = invest(S,r,N)
%function M = invest(S,r,N)
%
%  Calculate monthly deposit M for given saving goal
%  By Joe Student, COEN 45
%
%  Inputs
%       S -- investment goal, $
%       r -- annual interest rate, %
%       N -- duration, yrs
%
%  Output
%       M -- monthly deposit, $
error(nargchk(3,3,nargin));  %% must have exactly 3 inputs
```

- Chapter 7, problem 22. Hints:
  - Name the function `ellipse_plot`, not `ellipse-plot`
  - Create a range of x values from one end of the ellipse to the other
  - Calculate `yupp`, the upper half of the ellipse
  - Calculate `ylow`, the lower half of the ellipse
  - Plot both halves using `plot(x,y1,x,y2)`
- Chapter 7, Problem 29