# Homework 1 (Due Tuesday, June 17)

If you encounter any difficulties with this assignment (e.g., `Matlab` does not find your file), please explain that in your homework. We will try to resolve the issues on Wednesday.

1. Read the course syllabus and the description of the extra credit project. Both can be found at:

   `http://www1.pacific.edu/~abeltuko/math_55/math55.html`

   Now answer the following questions:

   (a) What is the instructor's last name?

   (b) When is the first test?

   (c) What do you need to do in order to get full participation points?

   (d) When are all extra credit projects due?

   (e) What is the only acceptable format for submitting an extra credit project?

2. Copy the following code into a file named `homework1.m` and place the file in a directory where `Matlab` can find it (The course syllabus explains how to access `Matlab`). Run `homework1.m` and print the output. If you are unfamiliar with the syntax, use `help` to look up commands. E.g., type into the command window `help linspace` to see what `linspace` does. In the future, you can modify `homework1.m` to produce other plots.

```
% Simple plots in Matlab

% Define parameters
k = -.1;
w = 3;

% Use linspace to discretize the interval [0,2*pi]
t = linspace(0,2*pi,256);

% Elementary functions are vectorized and can be
```

```
% applied to the output of linspace; to multiply
% two vectors componentwise, use the dot, e.g., a.*b
x = exp(k*t).*cos(w*t);
y = k*exp(k*t).*cos(w*t) - w*exp(k*t).*sin(w*t);

% Use plot to graph functions of one variable
figure
plot(t,x,'b-')
hold on % needed to add another plot
plot(t,y,'r-')
xlabel('time (sec)')
title('Sample plot')
legend('position','velocity','location','best')
axis image
```