Handout Title Here
Instructor Name Here

or

Handout Title Here
Due: Due Date Here

Optionally, you may include either of the above titling in your document with the commands `\maketitleinst` or `\maketitle` respectively.

Here are some examples of the added commands. These commands must be run from **within a math environment**:

1. `\mb{x}` applies the `\mathbf{}` command to the argument. This example would result in $\mathbf{x}$.
2. `\mat{a & b \\ c & d}` would produce $\begin{bmatrix} a & b \\ c & d \end{bmatrix}$.
3. `\pd{X}{t}` produces the partial derivative $\frac{\partial X}{\partial t}$. Arguments can be skipped, `\pd{}{t}` yields $\frac{\partial}{\partial t}$. The second partial derivative would be written as `\pd{^2X}{t^2}` yielding $\frac{\partial^2 X}{\partial t^2}$.

1 Code Listings

The handout class uses the *listings* package. You should make become familiar with it and its options. The handout class defines a series of options to format the code listing in a consistent manor. You can override any of these configurations with calls to *lstlist*.

The handout class also defined the following environments to specify the code listing's language, these environments are:

1. matlabCode
2. cCode
3. javaCode
4. fortranCode
5. latexCode
6. noCode

All these environments take a second argument. This second argument is passed to a *lstlist* command, it may be left blank. For example to specify a caption for the listing.

```
\begin{matlabCode}{caption={This is a caption}}
        matlab code here
\end{matlabCode}
```

for the listing to be a float, have a captions and a label:

```
\begin{matlabCode}{float, caption={This is a caption}, label={samplecode}}
        matlab code here
\end{matlabCode}
```

1.1 MATLAB

The following Latex

```
\begin{matlabCode}{}
% This function models a mass-spring-damper system
function xdot = smd(t,x)
 m = 1;
 b = 0.05;
 k = 0.5;
 xdot = [0  1; -b/m -k/m]*x;
\end{matlabCode}
```

produces...

```
% This function models a mass-spring-damper system
function xdot = smd(t,x)
 m = 1;
 b = 0.05;
 k = 0.5;
 xdot = [0  1; -b/m -k/m]*x;
```