Some Useful MATLAB® Commands

- % indicates a comment
- **A = [23, 25, 49, 44, 25];** %Creates an row vector of data
- **B = logspace(1,3,5);** %Creates logarithmically spaced row vector of 5 elements from 10^1 to 10^3
- **C = linspace(1,20,50);** %Creates a linearly spaced row vector with 50 elements from 1 to 20
- **plot(B,A);** %Plots a linear graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as a solid line
- **plot(B,A,'--');** %Plots a linear graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as a dashed line
- **plot(B,A,':');** %Plots a linear graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as a dotted line
- **plot(B,A,'o');** %Plots a linear graph of A (ordinate) vs. vector B (abscissa) with the data shown as points labeled as 'o'
- **semilogx(B,A);** %Plots a semilog graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as a solid line
- **semilogx(B,A,'--');** %Plots a semilog graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as a dashed line
- **semilogx(B,A,':');** %Plots a semilog graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as a dotted line
- **semilogx(B,A,'o');** %Plots a semilog graph of vector A (ordinate) vs. vector B (abscissa) with the data shown as points labeled as 'o'
- **grid on;** % Puts in grid lines and draws a box around the plot
- **ylabel('Voltage (mV)');** %This does what you would expect
- **xlabel('Frequency (Hz)');** %This does what you would expect
- **title(['Figure Title ', date]);** %Places a title with the date above the figure
- **help command** %Displays information about the command
- **doc command** %Displays reference page in the Help browser
- **lookfor keyword** %Search all MATLAB files for the keyword
- **clear variables** %Clears variables in the Workspace
- **clc** %Clears the Command Window
- **addpath('directory')** %Add 'directory' to the Matlab path

NGspice MATLAB® Toolbox Functions

- **hspc_addline ('statement', hspc_filename);** %add 'statement' to the hspc file
- **hspc_set_param('ngspice_param', matlab_variable, hspc_filename);** %sets schematic parameter to Matlab variable

- **ngsim(hspc_filename);** %run NGspice using hspc_filename as the control file
- **sim_data = loadsig('simrun.raw');** %load NGspice data into Matlab variable sim_data
- **Vout=evalsig(sim_data, 'vout');** %extract node voltage vout to Matlab variable Vout