

**CECS 211 - LAB 2**  
**Multisim 2001 and Series Resistors, Voltage Drops and KVL**

NAME:

POSSIBLE POINTS: 10

STUDENT ID:

COURSE DATE & TIME:

**DIRECTIONS:**

Open Multisim 2001, Start -> All Programs -> Multisim 2001 -> Multisim 2001.  
Now create a new circuit, File -> New.  
Save this file as lab2.msm to a safe location, i.e. flashdrive.  
Add a DC Voltage Source of 12V, Don't forget that Multisim needs to have ground connected at the negative side of our voltage source.  
Add 3 resistors in series, R1 = 1K, R2 = 4.02K, R3 = 4.99K. Order doesn't matter  
Now add 5 Digital Multimeters (DMMs)  
1 DMM to Measure Current through the series resistor network  
3 DMMs to Measure Voltage across each resistor  
1 DMMs to measure Voltage across the last 2 resistors (R2 and R3).

Now run the simulation.

**LAB WRITE-UP:**

The lab write-up will include this page as the cover sheet and a screenshot of the schematic running with the multimeters. You will annotate the schematic printout by showing the calculation required for each multimeter used as follows:

- 1 DMM to Measure Current through the series resistor network  
Equation: Find  $R_t$  and use ohm's Law.
- 3 DMMs to Measure Voltage across each resistor  
Equation: Using the Current found from above.
- 1 DMMs to measure Voltage across the last 2 resistors (R2 and R3).  
Equation: Use the Voltage drops found above.

Also write the complete KVL expression and show your starting point.