

### Phase I – Preliminary Results

Prepare a power point document with the following information:

- Op amp's circuit schematic (back annotate the schematics with all DC node voltages and branch currents)
- Bias circuit schematic (back annotate the schematics with all DC node voltages and branch currents)
- Table with the "size" of all op amp's devices
- Table with the "size" of all bias circuit's devices
- AC simulations of the differential pair stage "in isolation" for both DM and CM (DC gain, BW, CMRR, unity gain frequency and phase)
- Small and large signal transient response simulations of the differential pair stage in "isolation" (use a step input signal)
- AC simulations of the op amp. (DC gain, BW, unity gain frequency, CMRR, unity gain frequency and phase)
- Use the op amp to build a non-inverting resistive feedback amplifier and illustrate its behavior through AC simulation and transient simulation.
- Use the op amp to build an inverting resistive feedback amplifier and illustrate its behavior through AC simulation and transient simulation.
- Feel free to add any other information you feel relevant to demonstrate the "quality" of your design