**ECE2260**  
**Lab3 – Notebook Point Breakdown**  

*Communications (Keeping a Proper Notebook)  30 Points Total*
- Written in Ink ................................................................. 4
- Student Signed every page ............................................. 4
- Student Dated every page .............................................. 4
- TA Signature for every lab session (-3 each session missed) ... 6
- Student’s work Reproducible from notebook .................... 12

1. **Component Measurements  10 Points Total**  
   - Table of Components (Measured Values L and Ro) .......... 10

2. **Circuit Design  20 Points Total**  
   2.1. Equations:
   - $V_i(s)$ Laplace transform ........................................... 1
   - Laplace transform and init cond for C's ........................ 1
   - Laplace transform and init cond for R's and L ................ 1
   - $V_0(s)$ expression .................................................... 1
   - $V_1(s)$ expression .................................................... 1
   - Inverse transform of $V_0(s)$ ....................................... 4
   - Inverse transform of $V_1(s)$ ....................................... 4
   2.2. Circuit parameters:
   - Component values derivation ..................................... 2
   - Component values ................................................... 1
   2.3. Double Spiral:
   - Matlab plot of expected spiral x-y plot $v_1(t)$ vs $v_0(t)$ ...... 2
   - Matlab code listing ................................................... 2

3. **Measurements  20 Points Total**  
   3.1 Construction:
   - Schematic of constructed circuit with component values .......... 2
   3.2. Display $v_0(t)$ and $v_1(t)$:
   - notes on debugging circuit ......................................... 1
   3.3. Display the spirals:
   - sketch of spiral $v_1(t)$ vs $v_0(t)$ from oscilloscope .......... 3
   3.4. Measure $v_0(t)$ and $v_1(t)$ versus time:
   - derivation of how values derived from oscilloscope waveform .... 6
   - measured values alpha, beta, a, b, c, and psi .................. 6
   - measured component values R1, R2, R3, C1, C2 .................. 2

4. **Comparison of Calculated and Measured Results  15 Points Total**  
   4.1. Calculations with measured component values:
   - Matlab plot of calculated and actual $v_0(t)$ versus time ...... 3
   - Matlab plot of calculated and actual $v_1(t)$ versus time ...... 3
   - Matlab code listing for plot .......................................... 3
   4.2. Spirals:
   - Comparison plot of calculated and measured spirals $v_0(t)$ vs $v_1(t)$ .... 3
   - Matlab code listing for plot .......................................... 3

5. **Conclusions  5 Points Total**