

ECE2270**Lab3 – Notebook Point Breakdown**

<i>Communications (Keeping a Proper Notebook)</i>	<i>30 Points Total</i>
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
 <i>1. Component Measurements</i>	 <i>10 Points Total</i>
Table of Components (Measured Values L and Ro)	10
 <i>2. Circuit Design</i>	 <i>20 Points Total</i>
2.1. Equations:	
Vi(s) Laplace transform	1
Laplace transform and init cond for C's	1
Laplace transform and init cond for R's and L.....	1
V0(s) expression.....	1
V1(s) expression.....	1
Inverse transform of V0(s).....	4
Inverse transform of V1(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 v1(t) vs v0(t).....	2
Matlab code listing	2
 <i>3. Measurements</i>	 <i>20 Points Total</i>
3.1 Construction:	
Schematic of constructed circuit with component values.....	2
3.2. Display v0(t) and v1(t):	
notes on debugging circuit.....	1
3.3. Display the spirals:	
sketch of spiral v1(t) vs v0(t) from oscilloscope.....	3
3.4. Measure v0(t) and v1(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
 <i>4. Comparison of Calculated and Measured Results</i>	 <i>15 Points Total</i>
4.1. Calculations with measured component values:	
Matlab plot of calculated and actual v0(t) versus time	3
Matlab plot of calculated and actual v1(t) versus time	3
Matlab code listing for plot.....	3
4.2. Spirals:	
Comparison plot of calculated and measured spirals v0(t) vs v1(t).....	3
Matlab code listing for plot.....	3
 <i>5. Conclusions</i>	 <i>5 Points Total</i>