

ELEN 50: Electric Circuits I

Lab Schedule

Winter 2017

January 9, 2017 – March 17, 2017

Week #	Lab # / Name	Lab Objectives
1	0 - Introduction to MATLAB	Learn the basics of MATLAB
2	1 - Vectors and Matrices MATLAB	Learn how to use vectors and matrices with MATLAB
3	2 – Circuits with Series and Parallel Resistors	Familiarize with measurements on electric circuits; use Kirchoff's laws and determine equivalent resistances
4	3 – Wheatstone Bridge	Verify the operation of a Wheatstone Bridge
5	Project 1 – Optimal Power Delivery	Design a MATLAB code to simulate a power distribution network
6	Project 1 – Optimal Power Delivery	Verify simulation results from previous week with measurements
7	4 – Operational Amplifier Circuits	Design and implement an inverting amplifier according to specifications
8	5 – RC Circuits	Experimentally verify the time constant of a simple RC circuit, and demonstrate a high-pass filter and a low-pass filter
9	Project 2 – Basic Filter Design	Design a MATLAB code to simulate basic active filters
10	Project 2 – Basic Filter Design	Verify simulation results from previous week with measurements