LAB 7: Current Balance TOTAL \_\_\_\_\_\_ \_\_\_\_ **Cover Page [10 Points]** 85

\_\_\_\_ Course Name [0.5 Points]

\_\_\_\_ Title of the Experiment [0.5 Points]

\_\_\_\_ Name [0.5 Points]

\_\_\_\_ Lab Partner’s Name(s) [0.5 Points]

\_\_\_\_ Group Number [0.5 Points]

\_\_\_\_ TA’s Name [0.5 Points]

\_\_\_\_ Date of Experiment [0.5 Points]

\_\_\_\_ **ABSTRACT [6.5 Points]**

\_\_\_\_\_ **Objectives [5 Points]**

**\_\_\_\_\_ Procedure [5 Points]**

**\_\_\_\_\_ Experimental Data [15 Points]**

**\_\_\_\_\_** b measurement (distance from mirror to ruler) [1 Point]

\_\_\_\_\_ xeq from ruler [1 point]

\_\_\_\_\_ xt from ruler [1 point]

**\_\_\_\_\_** Graph of I2 vs. Fg Current Direction 1 [6 points]

**\_\_\_\_\_** Graph of I2 vs. Fg Current Direction 2 [6 points]

**\_\_\_\_\_ Results [20 Points]**

\_\_\_\_\_ Statement of Necessary Equations [10 Points]

\_\_\_\_\_ State Equations [4 Points]

\_\_\_\_\_ Define the parameters [2 Points]

\_\_\_\_\_ Explain derivation (where do equations come from?) [4 Points]

\_\_\_\_\_ Calculation of r [1 point]

\_\_\_\_\_ Calculation of μ0 for current direction 1 [4 points]

\_\_\_\_\_ Calculation of μ0 for current direction 2 [4 points]

\_\_\_\_\_ Percent error for averaged μ0 [1 point]

**\_\_\_\_\_ Discussion and Analysis [20 Points]**

\_\_\_\_\_ Using slope from graph 1 correctly [6 points]

\_\_\_\_\_ Using slope from graph 2 correctly [6 points]

\_\_\_\_\_ Why do you switch the direction of the current? [2 points]

\_\_\_\_\_ Free-body diagrams [6 points]

**\_\_\_\_\_ Conclusion [10 Points]**

\_\_\_\_\_ Was Objective Completed [3 Points]

\_\_\_\_\_ Application to Real World [2 Points]

\_\_\_\_\_ Overall report is well written and follows syllabus in format [5 points]

**\_\_\_\_\_ Total [Out of 85 Points]**