

# Lab 1 Report

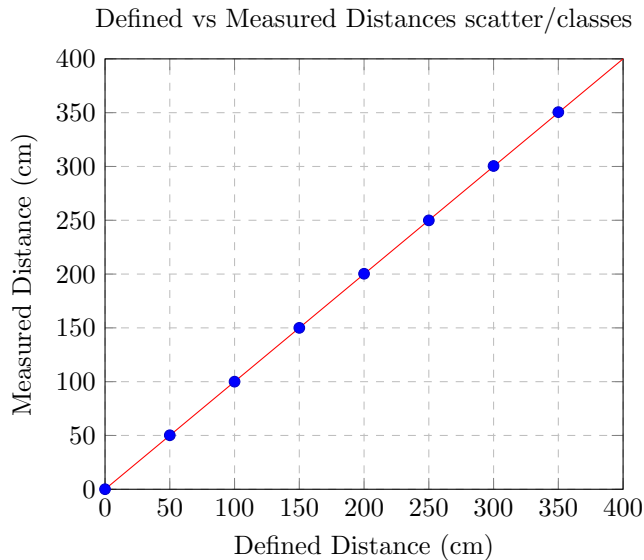
## EEET-427-01: Control Systems

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The distance sensor is accurate to within  $\pm 1\text{cm}$  between a distance of  $0\text{cm}$  and  $375\text{cm}$ .

Actual Value (mm)	Minimum Measurement (mm)	Maximum Measurement (mm)
0	0	1
500	498	506
1000	997	1003
1500	1497	1503
2000	1998	2008
2500	2495	2503
3000	2999	3010
3500	3550	3560
4000	3994	4036



One possible use of this is for redundancy in a liquid level measurement system. (The system would most likely already be using a float as its main measurement system. In the event that the sensor for the float failed, the distance sensor could measure the distance the float moves to determine the level of fluid in the tank, as a back-up measurement system).