ELEC 341 – Graded Assignments

# Project P-2

# 9 Marks

Learning Objectives

- 2nd Order Approximation of OTS Voltage Amplifier

*You are using an off-the-shelf (OTS) voltage amplifier. The data-sheet does not provide a linear model but it does provide an experimental step response. Estimate it using the best method that you learned in the assignment.*

**Raw Data from Data-Sheet**

Run **P2_AmpDataPlot.p** to plot the step response of your OTS Voltage Amplifier.
Assume this is the raw data downloaded from the web-site.

**Specifications**

Plot the continuous step response yVec. Estimate:

- P2_ampTr = Rise Time (msec)
- P2_ampTp = Peak Time (msec)
- P2_ampTs = Settle Time (msec)
- P2_ampOS = %Overshoot (%)

**2nd Order Approximation**

Compute the transfer function of the most appropriate 2nd order approximation.

- P2_ampTF = Approximated xfer function (V/V)

**Comparison**

Generate the step response of your transfer function.
Add your step response to the figure containing the raw data.

Deliverables

**Values**

- P2_ampTr (1 marks)
- P2_ampTp (1 marks)
- P2_ampTs (1 marks)
- P2_ampOS (1 marks)
- P2_ampTF (2 marks)

**Figures**

- Comparison (3 marks)