



1. (20 marks) Given the data in the elearning site. The data represent the system shown in Figure (1). The system shown in the figure is unknown, and it is required to identify that system. Build an adaptive filter that uses Wiener-Hopf equations to identify that system given the input and the output signals. You have to plot the transfer characteristics (frequency response) of the estimated system.

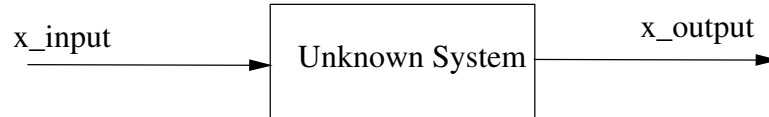


Figure 1: System Identification Problem

**Good Luck**