**CSCE 654 Project 1**

**Due 8 Apr 19**

**Objective:** Gain an understanding of simulation modeling and analysis through OMNet.

**FIFO Queue**

Implement and analyze the delay performance of a simple first-in-first-out (FIFO) queuing system under the following conditions:

1. Inputs to the FIFO queue arrive at fixed intervals of time. Three different scenarios exist. You either need to perform three separate simulation trials, or design three queues and execute them simultaneously:
   1. an input every 1 second
   2. an input every 1/2 second
   3. an input every 1/4 second
2. The service time of the queue is fixed at 3/4 of a second.
3. The FIFO queue has infinite capacity.
4. Outputs of the queue should be collected for data analysis.
5. Simulation time is 60 minutes.
6. You are encouraged to work and consult with other students on this part of the project, but you must do the project and write-up yourself.

FIFO Server

**Write-up:**

For the FIFO queue, your write-up should include delay plots showing the system response and a narrative explaining why you got the results you did.