

# Notes in ECEN 5623

Zachary Vogel

March 15, 2016

## Lecture

read chapter 12 sections 6-11

form groups today for EX 5,6 and Final Project

3/21-25 Spring Break!

3/29 Exercise 4

4/5 Exercise 5

proposal is the core part of exercise 5.

## Lecture

ICT, IOT, OR, NOA, Di, CPI

Message Queues

Provide communication and synchronization

traditional message queue

message size, internal fragmentation

heap message queue

messages are pointers

message data in heap

nice thing is that once in the queue it can be seen and used atomically.  
parallel processing speed up

Amdahl's law - speed up with # of cores and parallel portion.  
That's all for the I/O session.

Now we will talk more about implementation.  
still grading exam 1  
exercise 4 is last practice oriented 1  
exercise 5 is to do the in-depth project description  
exercise 6 will be to complete the project

## BUS I/O

VME and PCI busses

VME=(VESA Module Expansion) expansion on another bus

PCI= peripheral component interconnect

VME is asynchronous so you just have handshaking protocols  
PCI has a synch clock  
Bus arbitration built-in.  
PCI also has bridging ability.