Minnesota State University Moorhead

CSIS 320: Architecture

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 4

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:
This course requires the following prerequisite
CSIS 255 - Data Structures

Corequisites: None

MnTC Goals: None

Basic principles of processor organization, machine instructions, addressing modes, memory management, and input/output operations. Includes coverage of assembly language.

B. COURSE EFFECTIVE DATES: 08/25/2008 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Logic gates, modules and circuits
2. Basic computer organization and design
3. The Micro-architecture level
4. The Instruction Set Architecture level
5. Operating System level
6. Parallel Processors

D. LEARNING OUTCOMES (General)

1. Design an adder, shifter, basic memory and a simple CPU
2. Analyze the performance of pipeline, cache, paging and segmentation
3. Translate simple machine instructions into microcode and control signals
4. Differentiate between different levels of computer organization
5. Analyze the performance improvements of parallel computers
6. Write correct assembly programs

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted