Bemidji State University

CS 2810: Computer Organization and Assembly Language Programming

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

An introduction to the register level architecture of a modern computer and programming with an assembly language for that processor. Includes a two-hour lab. Prerequisite or Corequisite: CS 2322.

B. COURSE EFFECTIVE DATES: 08/20/1997 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

- 1. Alternative Architectures
- 2. Assembly Language Programming
- 3. Data Representation
- 4. Digital Logic
- 5. Input/Output and Storage Systems
- 6. Instruction Set Architectures
- 7. Memory Hierarchy

D. LEARNING OUTCOMES (General)

- 1. write simple assembly language programs that include function call and return.
- 2. demonstrate understanding of representation systems for numerical and character information, including error detecting and error correcting systems.
- 3. demonstrate understanding of digital logic including combinational and sequential circuits.
- 4. demonstrate understanding of instruction set architectures.
- 5. demonstrate understanding of basic computer organization, including aspects of the CPU cycle, data paths, buses, and register transfer notation.
- 6. demonstrate understanding of microprogramming.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted