ELEC 2213: Introduction to Microprocessor Electronics

A. COURSE DESCRIPTION
   Credits: 4
   Lecture Hours/Week: 2
   Lab Hours/Week: 4
   OJT Hours/Week: *.*
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None

   This course provides a fundamental understanding of how a microprocessor communicates with other devices, such as memory, disk drives, keyboard, and monitors. It also provides an understanding of how to get all of these devices internally to work together as a system. We will learn how to do proper maintenance to provide top performance. (Prerequisite or concurrent enrollment in ELEC2211) (4 credits: 2 lecture/2 lab)

B. COURSE EFFECTIVE DATES: 02/11/2004 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
D. LEARNING OUTCOMES (General)
   1. Describe the application of dynamic and static types of RAM
   2. Describe Buses
   3. Describe Chipsets
   4. Explain form factors
   5. Describe I/O ports
   6. Describe expansion slots
   7. Describe microcomputer applications
   8. Identify memory slots
   9. Identify jumpers and switches
  10. Identify mother board problems
  11. Describe types of memory
  12. Demonstrate cleaning a mouse
  13. Identify CPU type
  14. Describe SRAM
  15. Describe DRAM
  16. Describe RAM packaging
  17. Describe upper memory
  18. Describe expanded memory
  19. Describe extended memory
  20. Identify BNC connectors
  21. Identify DIN and mini-DIN connectors
  22. Identify USB cables
  23. Identify IEEE 1394 (FireWire) cables
  24. Demonstrate how to test a ribbon cable
  25. Describe microcomputer busses
  26. Describe magnetic storage operation
  27. Describe optical storage operation
  28. Describe disk partitions
  29. Analyze program instruction flow

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted