

Minnesota State College Southeast

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