

COURSE TITLE AND NUMBER: Introduction to Digital Logic and Microprocessors EGT 160

North Central Michigan College

NCMC MASTER COURSE SYLLABUS FOR YEARS 2001-2003

DIVISION/AREA: Business and Technology

DEPARTMENT:

DIVISION DIRECTOR: Robert J. Marsh, Ph.D., P.E.

ORIGINATOR:

DEAN OF INSTRUCTION: Timothy Dykstra, Ph.D.

TOTAL HOURS OF INSTRUCTION: 6 LECTURE: 3 LAB: 3 TOTAL CONTACT HOURS: 105.6

COURSE NUMBER: EGT 160

CREDIT HOURS:

COURSE TITLE: Introduction to Digital Logic and Microprocessors

TRANSFERABLE YES: NO: X TO:

PREREQUISITE(S)/COREQUISITE(S)/ADVISORY: MTH 111

CATALOG DESCRIPTION:

A study of number systems, logic gates, combinational logic, logic functions, flip flops, multivibrators, counters, shift registers and memories. Also included is an introduction to PLD's, microprocessor systems, and system interfacing. Lab exercises include the application of logic in circuits and microprocessor programming using assembly language.

GENERAL EDUCATION OUTCOMES:

- Think critically and analytically
 - Independently acquire knowledge
 - Select and use mathematical tools for problem solving and decision making
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COURSE OBJECTIVES & OUTCOMES:

METHODS OF INSTRUCTION: Lecture, hands on exercises, homework assignments, lab exercises

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METHODS OF EVALUATION:

Evaluation Criteria:	Test 1.....15%
	Test 2.....15%
	Test 3.....15%
	Final Exam.....25%
	Labs.....30%

REQUIRED TEXTS: Digital and Microprocessor Fundamentals by William Kleitz Third Edition

OPTIONAL SUPPLEMENTARY MATERIALS:

Reasonable accommodations may be provided for students with documented physical, sensory, cognitive, systemic, and/or psychiatric disabilities. Please contact the Education Opportunity Program (EOP) at (231) 348-6687 to arrange services for this course.

TIME ALLOWANCE AND SEQUENCE OF INSTRUCTION:

Week	Chapter	Topic
1	1	Introductory concepts
2	2	Digital Number Systems
3	3	Logic Gate Operations
4	4	Combinational Logic Circuits
5	5	Data Control Devices and Displays
6	6	Flip Flops
7	7	Counters and Shift Registers
8	8	Memories
9	9	Microprocessor Fundamentals
10	10	8085A Assembly Language
11	10	8085A Hardware
12	10	8085 Instruction Set
13	11	Interfacing to Analog World
14	12	Analyzing Logic
15	13	Memory Expansion
16	--	Review and EXAM

APPROVED FOR ADOPTION BY THE CRD/AP COMMITTEE ON _____