

RYERSON UNIVERSITY
DEPARTMENT OF COMPUTER SCIENCE
CPS213 – FALL 2008
COMPUTER ORGANIZATION I

Instructor: Dr. M. Fiala
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Course: Computer Organization I
Section: 001, 002, 003
Lectures: Mon. 13:00-15:00 KHS369
Fri. 12:00-13:00 KHE321C
Labs: Tue. (Section 003) 9:00-11:00, ENG 211
Thur.(Section 001,002) 9:00-11:00, ENG 211
Office Hours: Mon. 15:00-16:00

Text: Digital Design, 4th Edition, 2007
M. Morris Mano, Prentice-Hall

Evaluation:	Midterm Test	1 1/2 hr.	30%
	Final Exam	2 hr.	50%
	Labs		15%
	<u>Quizzes</u>		<u>5%</u>
	Total		100%

Date and location of the midterm test will be announced in the class.

In order to pass the course, it is necessary to obtain at least 50% total, and to pass all quizzes with > 80% on each quiz. You must re-take the quizzes until you pass them. The quizzes have equal value, you receive a mark of 1 or 2 for each passed quiz depending on if the quiz is completed within one week of the lecture in which it is given.

Course Outline:

CPS213 presents an introduction to logic circuits and computer architecture. This course starts with providing an understanding of Boolean algebra, logic gates and complex logic circuits. It then proceeds by providing an overview of computers; defining the key components of a computer system and showing how these components interact. The topics covered in this course are:

- Number systems relevant to computer data representation and the review of truth table for logic operations
- Computer arithmetic; binary addition and subtraction; complementary number representation; ASCII; parity; BCD
- Using Boolean Algebra in the optimal design of logic circuits
- Design of Combinational Circuits; adders; complementers; etc.
- Sequential Circuits; flip-flops types; circuits with memory; registers

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- State Diagram
- Design of Sequential Circuits
- Counters and finite state machines; memory cells and organization
- CPU design and operation; architectural issues; buses; tristate logic

IMPORTANT COURSE INFORMATION – PLEASE READ VERY CAREFULLY:

Lab Policy:

Missing a lab or handing a late lab results in a mark of '0' for that lab. There will be no make-up lab.

Test Policy:

Missing a test/exam for any reason (with the exception of medical reasons) results in a mark of **0** for that test/exam. There will be no make-up test/exam. In case of illness, you need to provide a dated doctor's note stating your illness and the expected duration of your illness. (Your doctor must fill out the medical form provided by Ryerson.)

Cheating Policy:

Please read the university policies on academic conduct and plagiarism carefully.

Announcements:

Announcements regarding test/exams will be made periodically in class. It is your responsibility to find out about any announcements you have missed. You are also expected to read the course webpage for any possible announcements.

Grading Concerns:

You will not have the opportunity to make an appointment with instructors AFTER you know your final grades, to discuss changing them. Your mark will be based on your performance, i.e., tests and final exam.

There will be no deviation from the stated evaluation criteria. It is your responsibility to attend lectures to find out if any marked material has been handed back. Mistakes in addition must be reported immediately. No marks will be altered after the one-week deadline.

THE INFORMATION ON THIS FORM WILL NOT BE ALTERED WITHOUT PRIOR NOTIFICATION AND DISCUSSION IN THE CLASS.