COSC290 Principles of Computer Organization **Fall 2011**

Computer and Information Sciences
Towson University
Towson, MD 21252

COURSE

Number	Title	Timings	Text	Alt-texts	Section	Class room	Final Exam Date
COSC290	Principles of Computer Organization	M-W 4-6.40PM	Computer Organization and Architecture	Class Notes & Slides	101	YR 203	Dec 19, 4.00-6.40PM YR203

FACULTY

Name	Office	Phone	Email	OfficeHours
Dr. Ramesh K. Karne	7800 York Rd #429, Lab 308	410-704-3955	rkarne@towson.edu	M, T, W 2-3 PM

GRADES

Labs	Quizzes	Midterm	Final	Homework
30%	20%	20%	20%	10%

Course Objectives: The main objectives of this course will be to understand computer organization, architecture, hardware facilities in a computer, familiarity of logic simulator and basics of Intel's assembly language programming. In addition, this course will prepare for knowledge that will be useful to understand operating systems.

Homework: There will be 4-5 homework assignments from the textbook that will help to build additional knowledge of computer organization, architecture, and some internal structures. Homework must be returned on the due date, otherwise, there will be "**zero points**" given for that assignment. The homework must be done independently and they must be original. Late submissions may be accepted under emergency situations, with the consent of the faculty. There is no credit for group efforts. Plagiarized work counts as zero and a letter to that effect will be placed in your file.

Quizzes: There will be 4-5 quizzes from the textbook that will test the topics covered in the class. These quizzes will be multiple choice questions and they will be conducted in the class during the class period without providing any advance notice. Be prepared for the quizzes and do not miss any classes in normal circumstances. In emergency situation a given quiz may be administered outside the classroom if it is needed.

Exams: There will be one mid-term and one final exam which cover the topics discussed during the class period. It does not include any laboratory experiments. These exams will be multiple choice derived from textbook, class discussions and slides.

Laboratory Exercises: The laboratory exercises will be based on two basic parts. First, there will be a variety of design and test experiments based on a logic simulator known as **Logisim**. The second part consists of writing and testing small assembly calls that can be invoked through a C programming language interface that uses Visual Studio environment. All the necessary tutorials and programming environment will be provided to code and test small snippets of assembly language programs. The 30% of the grade will be based on laboratory exercises, participation and demonstration of your knowledge learned in the laboratory exercises. Each lab exercise consists of 10 points.

Class Schedules:

#1, #2	Chapter 1. Introduction
#3, #4	Chapter 2: Data Representation in Computer Systems
#5, #6	Chapter 3: Boolean Algebra and Digital Logic
#7	Chapter 4: MARIE (basics) http://www.jblearning.com
#8(half class)	**MIDTERM EXAMINATION**
#8, #9	Chapter 5: A Closer Look at Intel Architecture
#10,#11	Chapter 6: Memory
#12	Chapter 7: Input/Output and Storage Systems
#13, #14	Chapter 8: System Software
#15	Chapter 9: Alternative Architectures
Final Examination	Dec 19, 2011

Lab Schedules:

#0	**Learn Logisim simulator tutorial and basic logic circuits with introduction to Boolean algebra.**
#1	Build and test basic logic circuits along with their Boolean functionality and expressions.
#2	Build complex logic circuits such as half adder, full adder, decoder, multiplexer, and demultiplexer.
#3	Build memory and latch circuits.
#4	Build parity checkers and hamming code generators.
#5	Build circuits of your own choice and test.
#6	**Learn Visual Studio, C and Assembly environment**.
#7	Code and test simple arithmetic functions.
#8	Code and test string functions.
#9	Code and test bit operations.
#10	Code and test program control functions.
#11	Code and test complex operations (e.g.big integers).
#12	Code and test complex operations continued...
#13	Code programs of your own choice and test.
#14	Show and tell of your lab exercises.

Attendance Policy: Attendance is expected at all classes and labs. Attendance will be taken in each class. There will be no makeup tests given later to absentees. If you miss a class or a lab for some foreseeable reason arrange for an earlier test. If you miss classes consistently, or come late to classes, you will be deducted 20% from your final grade.

Class Participation: The class participation of a student is mandatory. This includes: questions, interaction with other students, project discussions, and demonstrating your understanding of the subject among peers. A brief overview of the previous class presentations will be summarized in some classes. This is the best chance for you to participate and make yourself well known in the class and to the faculty. That means, you must come prepare for every class!

Examinations: There will be one mid-term and one final examination as scheduled. The examinations will cover material taught in the class, textbooks, classroom discussions, and class assignments. Class notes and attendance will be very crucial to score well in the exams. Class discussions, which are not in the textbook, will be tested in the exam.

Make Up Policy: If a student must miss an exam, it is the student's responsibility to provide sufficient documentation of the reason for the absence. Otherwise, a grade of zero will be assigned.

Grading Policy and Discussions: All grading controversies and discussions must be done during office hours and not in the classroom. The grading as discussed in the syllabus will be strictly enforced. Plus, Minus grading will be used as described in the catalog.

GRADING

90-100	A
88-89	A-
85-87	B+
80-84	B
78-79	B-
70-77	C
60-69	D
<60	F

Office Hours: Even though office hours are as listed above, if someone needs immediate help and attention with the assignment, they are welcome to knock on my door when I am in the office or in the lab. I will not be reading email during the weekends.

Classroom Policies: There is no food allowed in the classroom. If you happen to bring a soft or hot drink to the classroom, you must clean up the mess. You can't show any rude behavior with your fellow classmates or instructor in the classroom, which may result in removing you from the class. If you have any problems with people, you must discuss that with the instructor during the office hours and file an official complaint, which will be resolved by the instructor, or it will be taken to the Chair of the department for further resolution. **There is absolutely no gossip in the classroom, if you do need to chat please go outside the classroom to do it.**