COE 205 Syllabus – Spring 2008
Computer Organization & Assembly Language

Computer Engineering Department
College of Computer Sciences & Engineering
King Fahd University of Petroleum & Minerals

Professor: Muhamed Mudawar, Room 22/328, Phone 4642
Office Hours: SMW 10 – 11 am, 12 – 1 pm.
Course URL: http://faculty.kfupm.edu.sa/coe/mudawar/coe205/
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Catalog Description
Introduction to computer organization. Octal and hexadecimal number systems, ASCII codes. Assembly language programming, instruction formats and types, memory and I/O instructions, arithmetic instructions, addressing modes, stack operations, and interrupts. ALU design, RTL, microprogramming, and hardwired control design. Practice of assembly language programming.

Prerequisites: COE 202, ICS 102.

Textbooks and References

Course Objectives
• Proficiency in assembly language programming, particularly for the Intel 80x86 processor family. Ability to analyze, design, implement, debug, and test assembly language programs.
• Knowledge of the organization of a computer and its components. Understanding the design of the data path and the control unit of a simple CPU, and the fetching and execution control sequences of simple instructions at the register transfer level.

Grading Policy
Laboratory 15%
Project 15%
Programming Assignments 10%
Written Assignments and Quizzes 10%
Major Exam I 15%
Major Exam II 15%
Final Exam 20%

Assignments should be submitted at the beginning of class time in the specified due date.
Late programming assignments are accepted, but will be penalized 5% for each late day, up to a maximum of five late days.

Software Tools
• Microsoft Macro Assembler (MASM) version 6.15
• Link Libraries provided by the author (Irvine32.lib and Irvine16.lib)
• Microsoft Windows debugger
• ConTEXT editor

Prepared by Dr. Muhamed Mudawar – February 16, 2008