CS 310 Introduction to Computer Systems
Syllabus, Fall 2017

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Classroom: Blocker 12
Meeting time: TT 1pm - 2:15pm
Office hours (Blocker12/VII_FS104)**:** W 3:45pm – 5:35pm, TT 2:15pm – 4:20pm, and by appointment

Catalog description: Introduces the basic concepts of computer organization and assembly language. Specific topics include CPU and memory organization, machine language, addressing techniques, macros, program segmentation and linkage, and assembler construction. Prerequisite: CS 212 (C or better) or consent.

Textbook: Assembly Language For Intel-Based Computers, 5th Edition. Kip R. Irvine. Prentice Hall. 2007

Course goals:
1. To learn the fundamental knowledge on computer architectures.
2. To learn the assembly language with Intel IA-32 processor family includes directives, addressing, macros, operators, and program structure.
3. To understand the computer hardware manipulation and interaction between assembly language programs, the operating systems, and other application programs.

Teaching:
1. Classroom lecturing on programming theory, techniques and principles.
2. Lab on programming being integrated with classroom teaching.
3. A few of lectures and tests being conducted electronically (through BlackBoard)

Evaluation:
1. There will be about 10 programming assignments.
2. There will be two tests and a comprehensive (final) exam. There may be mini-tests and quizzes if needed. NO MAKE-UP tests will be given. Please do NOT try to take it early or late also, especially the comprehensive exam.

*Grading strategies***:**
1. Assignments, quizzes, and participation have a weight of 30%.
2. Tests have a weight of 35%.
3. The comprehensive exam has a weight of 35%.

The final score will be calculated as a percentage of points earned versus total points possible, with the final letter grade being assigned according to the scale as follows:

A (93 or above)   A- (90 – 92)
B+ (87 – 89)   B(83 – 86)   B- (80 – 82)
C+ (77 – 79)   C (73 – 76)   C- (70 – 72)
D+ (67 – 69)   D (63 – 66)   D- (60 – 62)
F (59 or less)

Attendance is *required*. A maximum of three absences without valid reasons will be excused, and excessive absence will reduce your grade one letter for each absence.

Virginia Wesleyan University is committed to giving all students the opportunity of academic success. If you are a student who is requesting accommodations based on the academic impact of a disability, speak to me about your accommodations letter and your specific needs. If you do not have an accommodation letter for this course, you will need to visit or call for an appointment with Disability Support Specialist Crit Muniz at (757) 233-8898 or by email at nmuniz@vwu.edu to coordinate reasonable accommodations. He is located in the Learning Center, Clarke Hall.

Course outline:

Week	Date	Contents
1	08/29, 08/31	Introduction
2	09/05, 09/07	Binary/hex arithmetic
3	09/12, 09/14	Architectures
4	09/19, 09/21	Flags. Stack
5	09/26, 09/28	*TEST 1A*. More on stack
6	10/02, 10/05	ASM languages
7	10/10 -	Indirect addressing (IA)
8	10/17, 10/19	More on IA
9	10/24. 10/26	Review. *TEST 1B*
10	10/31, 11/02	Conditional processing
11	11/07, 11/09	More on conditional jump
12	11/14, 11/16	Jumps. Procedures
13	11/21 -	*TEST 2*
14	11/28, 11/30	More on procedures
15	- 12/07	Structures and Micros

Test 1A: Thursday, Sept. 26
Test 1B: Thursday, Oct. 26
Test 2: Tuesday, November 21
Final Exam: 3pm-5:30pm, Tuesday, Dec. 12