

CS252 – Assembly Language

Michael E. Ruth, Ph.D.

Office: Megerle Science Bldg, Room 115

Office Hours: T/Th 11:20-12:50 AM

W/F 2:00- 4:00 PM

Or By Appointment

Phone: (718) 420-4034

Email: michael.ruth@wagner.edu

AIM: michaelruthphd

Web: Wagner Moodle

Course Description:

Data representation, instruction type and format, branching, stacks, subroutines, procedures, assembling, linking, and macros.

Course Objectives:

- Develop an understanding of the basic principles of computer architecture as applied to the Intel IA-32 processor family including how those processors manage memory.
- Describe how high-level language compilers translate statements from their language into assembly language and native machine language code.
- Understand Boolean logic and how it applies to programming and computer hardware.
- Demonstrate an understanding of data representation, including signed and unsigned integers, real numbers, and character data.
- Demonstrate proficiency in developing assembly language programs including:
 - The lifecycle of assembly language programs (assembling, linking, and execution)
 - Defining variables of various types
 - Elements of the instruction set (transfers, addressing, and arithmetic)
 - Defining and using procedures in assembly language
 - Conditional and loop constructs
 - Defining and using simple and advanced procedures in assembly language
 - Integer arithmetic including shift, rotation, division, and multiplication
 - Defining and using procedures in assembly language

Textbook:

Assembly Language for Intel-Based Computers, 5th Edition, by Kip Irvine

ISBN: 978-0132383103

Grading Policy:

- Exams (30%) – Tentatively two exams
- Final Exam (30%) – **Wednesday 5/13/09**
- Homework/Class Participation (40%)

Grading Scale:

Letter grades will be determined by the following scale:

Average	Grade
93 - 100	A
90 - 92	A-
87 - 89	B+
83 - 86	B
80 - 82	B-
77 - 79	C+
73 - 76	C
70 - 72	C-
67 - 69	D+
60 - 66	D
< 60	F

Course Policies:

- You are expected (and strongly encouraged) to attend and participate in all lectures. However, your attendance (physical presence) is not a formal requirement and, therefore:
 - ***You are responsible*** for all material covered including all lectures, handouts, and announcements given via email, during class, or on the course web page
 - ***There will be no make-up examinations.***
 - *If an exam is missed due to an emergency, the final will be counted twice; once as a final, and once in place of the missed exam.*
- Late homework will be graded ***at my convenience.***
- Any preceding policies may be waived at my discretion

Disabilities:

If you have a disability for which you may be requesting an accommodation, you are encouraged to contact both your instructor and the Academic Advisement Center in the Union Building at (718) 390-3278 as early as possible in the term.

Academic Honesty:

The Wagner College faculty and student body take seriously the academic integrity of this institution. The Academic Honesty Committee (AHC), comprised of both faculty and student representatives, hears cases of academic dishonesty. If a professor is concerned that a student has acted dishonestly with regard to his or her academic work, the professor can turn the case over to the AHC for investigation. The Student Government Association (SGA) also wrote an approved student honor code in 2007 that reflects the commitment of the student body to academic integrity. All students are expected to be aware of and abide by Wagner's guidelines for academic integrity. If you have questions about these guidelines, it is your responsibility to ask.

Etiquette:

- Come to class on time. If you do come late, quietly find a seat and take it with as little disturbance as possible. If you must leave the room – do so quietly.
- As you walk into class, kindly silence all beepers, cell phones, and any other noise-producing equipment.
- Depending on the overall punctuality and attendance patterns, I may institute stricter policies over the semester (these policies will not be retro-active).

How to succeed in this class:

- Read the assigned reading ***before and after*** the class.
- Pay attention and participate in the class discussions.
- ***Asking for permission vs Asking for forgiveness → permission*** always wins!
- ***If you don't understand something get help early!***