COURSE: CS17 - Computer Organization and Assembly Language Programming

DESCRIPTION: Introduction to machine-oriented programming with PC Assembly Language designed to familiarize students with the basic structure and language of computers. Topics will include data representation in Hexadecimal and Binary format, memory addressing, processing of data on a system level, and more. Several programming projects will be assigned.

SECTION: 5535

LOCATION & TIME: Orient 204, Monday, 6:00 to 9:50PM

INSTRUCTOR: Ed Hassildine

CONTACT INFO: 548-2691 (Office – Orient 223)
548-2612 (Academic Computing Center – Orient 237A)
hassile@sunysuffolk.edu (College E-mail)


MATERIALS: USB Memory Stick

COURSE OBJECTIVES:

Upon completion of the course, students will be able to:
1. Supply definitions for various components of IA-32 Processor Architecture (memory, registers, interrupts, BIOS, etc.)
2. Convert between Decimal, Binary and Hexadecimal numbering systems.
3. Be able to understand a PC memory diagram.
4. Change and display the contents of internal registers and memory locations using Debug and PC Assembly Language.
5. Understand the differences between Intel Microprocessors and how they relate to memory addressing.
6. Create an Assembly Language source program using a Text Editor, and then Assemble, Link, and execute the program.
7. Use various techniques to debug and record the outcome of various Assembly Language assignments.
8. Use Assembly language instructions to MOVE data to and from memory and on and off the stack.
9. Do Integer arithmetic using Assembler language: Add, Subtract, Multiply and Divide.
12. Implement For and While Loop Structures using the Compare and Conditional Jumps.
13. Create Main and Subroutine procedures, including Near and Far routines.
   • More sophisticated programming may be addressed depending upon the pace set by the class.

PROCEDURES FOR ACCOMPLISHING COURSE OBJECTIVES:
1. Coming to class on-time, taking notes, interacting with the group, and staying for the entire class.
2. Participating in classroom laboratory exercises.
3. Prompt and satisfactory completion of any assigned homework (including reading assignments).
4. Prompt and satisfactory completion of assigned projects.
5. Completion of a Midterm Exam and a Final Exam.

Special Notes:

- Tests will be cumulative and straightforward.
- Makeup exams will be given only at the discretion of the Instructor (proof of legitimate absence required).
- Assignments/Projects due for a particular class session must be turned in upon arriving to class. Assignments that are turned in after the start of class will be considered late (points will be deducted). An assignment will not be accepted if it is more than 3 days late.
- The student is responsible for obtaining any missed assignments and class notes.

COLLEGE-WIDE ATTENDANCE POLICY:

All students are expected to attend every session of each course for which they are registered. Students are responsible for all that transpires in class whether or not they are in attendance. The college defines excessive absence or lateness as more than the equivalent of one week of class meetings during the semester. Excessive absence or lateness may lead to failure in a course or removal from the class roster. Students with more than three absences can be dropped from the course. See Page 66, "Absences and Attendance", in the 2004 - 2006 College Catalog.

PROFESSOR’S ATTENDANCE POLICY:

If you are going to be late to a class or miss a class, please contact me beforehand via E-mail or by leaving a message at one of the numbers above.

GRADING:

Homework Assignments/Projects 70%
Three (3) Exams 30%
Late Assignment/Project: -10 points / day, 3 days MAX.

CLASSROOM & LABORATORY CONDUCT:

Proper adult behavior is required of all students. NO EATING OR DRINKING WILL BE PERMITTED IN CLASS. COLLEGE POLICY PROHIBITS SMOKING WITHIN 50 FEET OF ACADEMIC BUILDINGS. ALL STUDENTS MUST HAVE A STUDENT ID. All students must adhere to college policies on computer use. Cheating will not be tolerated and disciplinary measures will be taken according to college policy. Please refer to the 2004 - 2006 Student Catalog, starting on page 63, for Academic and Student Policies.