Syllabus

Instructor: F.J. Fuglister
Office: Dolan E250, phone 397-4254
Hours: MWF 9 – 11, Tu 11 – 12, or by appointment
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Web Page: http://www.jcu.edu/math/faculty/eric/eric.htm


Prerequisite: CS 202, corequisite or prerequisite: MT 379

There are two basic goals for this course. The first is to gain some understanding of how computers really work. The second is to learn how to write assembly language programs. We will look at assembly languages for several computers. These two goals are closely related. Assembly language is very machine specific, so that one needs some understanding of the internal workings of a computer in order to program in its assembly language. Conversely some of the specific features of particular machines can only be accessed via assembly language. Furthermore, programs in higher level languages are translated into machine language before they run, so that a knowledge of machine language can help the programmer understand the operation of high level languages.

Topics:
- Digital logic and computer circuits
- Representation of data
- Assembly language programming
  - instruction formats
  - addressing modes
  - control structures
- The CPU
- Microprogramming
- RISCs
- Memory organization
- Input/Output
- Interrupts

Assignments: There will be regular written and programming assignments throughout the semester. These will be due at the beginning of class on the specified dates. Programs will be judged not only on correctness but also on clarity and style. Unless otherwise stated, all assignments are to be done on an individual basis.
Tests: There will be three hour exams, on Wed., Feb. 15, Mon., Mar. 20 and Wed., Apr. 26, and a final exam on Fri., May 12, 10:00 – 11:50 am.

Grading: Your grade in this course will be based on the assignments and tests in the following proportions.

40% Programming and written assignments
35% Hour exams
25% Final exam

Your letter grade will be assigned on the following scale.

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<tr>
<th>Letter</th>
<th>Minimum</th>
<th>Maximum</th>
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<tr>
<td>A</td>
<td>93 – 100%</td>
<td>C+</td>
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<td>A−</td>
<td>90 – 92%</td>
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<tr>
<td>B+</td>
<td>87 – 89%</td>
<td>C−</td>
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<tr>
<td>B</td>
<td>83 – 86%</td>
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<td>B−</td>
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Attendance Policy: You are responsible for the material covered in class, whether you are there or not. Late homework assignments will not be accepted. Makeup exams will be permitted only with a valid excuse.

John Carroll University recognizes its responsibility for creating an institutional climate in which students with disabilities can succeed. In accordance with University policy, if you have a documented disability, you may be eligible to request accommodations from the office of Services for Students with Disabilities. Students with disabilities are entitled to reasonable accommodations and should have equal access to learning. Please contact the office of Services for Students with Disabilities at (216) 397-4967 if you have any questions or to set up an appointment to meet with the coordinator, Allison West. After your eligibility for accommodations is determined, you will be given a letter which, when presented to instructors, will help us know best how to assist you. Please keep in mind that accommodations are not retroactive so it is best to register with Student Disability Services at your earliest convenience.