

SYLLABUS

CDA 3101 -- Organization of Computer Systems
Computer & Information Sciences & Engineering Department
University of Florida, Spring 2012

CATALOG DESCRIPTION: *Credits: 3; Prereq: COP3504 or COP3503; MAC 2233; MAC 2311 or MAC 3472*

Organization of computing systems. Logical basis of computer structure. Machine representation of instructions and data, flow of control, and basic machine instructions. Assembly language programming.

COURSE OBJECTIVES: This introductory course emphasizes essential concepts, the logical basis of computer structure, machine representation of instructions and data, flow of control, basic machine instructions, and assembly language programming. Students will be taught these basic concepts, and there will be exercises that help the student to learn the basics of assembly language programming. We also cover pipelined, parallel, and multicore architectures, to acquaint students with these architectures, the basics of how they function, and what practical problems are associated with these architectures. This is *not* an advanced course in computer architecture.

INSTRUCTOR: Dr. Mark Schmalz, office: CSE/E446, phone: 352-505-1561

OFFICE HOURS: As stated on instructor's Web page (see below), or by appointment via email (see below)

E-MAIL: mssz@cise.ufl.edu

CLASS WEB PAGE: <http://www.cise.ufl.edu/~mssz/CompOrg/Top-Level.html>

CLASS PERIODS:

- *Lecture:* (MWF 8th Period, FLG – Florida Gym – Rm. 0260)
- *Recitation:* Sec. 8767 (Wed 7th Period, RNK/225), TA: TBD
- *Recitation:* Sec. 5408 (Wed 9th Period, CSE/E221), TA: TBD
- *Recitation:* Sec. 8787 (Thu 4th Period, TUR/2336), TA: TBD
- *Recitation:* Sec. 1058 (Thu 5th Period, MCCA/1142), TA: TBD

CLASSROOM: MWF 8th Period, FLG – Florida Gym – Rm. 0260

TEACHING ASST:

- *William Chapman:* whchapman@cise.ufl.edu
- *Muhammad Rushdi:* mrushdi@cise.ufl.edu
- TBD

OFFICE HOURS: <http://www.cise.ufl.edu/~mssz/CompOrg/TA-hours.html>

TEXTBOOK:

Computer Organization and Design: The Hardware/Software Interface,
Fourth Edition by D. Patterson and J. Hennessy
Morgan-Kaufman (2009). ISBN: 978-0-12-374493 (Paperback)

SCHEDULE:

Weeks 1-2 - Intro to computers, architectures, technology, benchmarks
Weeks 2-4 - Programming the MIPS Architecture, language support
Weeks 5-6 - Number representations and arithmetic
Weeks 7-10 - Datapath design and pipelining
Weeks 10-12 - Memory, I/O devices, buses
Weeks 12-13 - System performance analysis
Weeks 13-16 - Parallelism and parallel architectures

ATTENDANCE Attendance at class and recitation/discuss sections is required. Students are expected to arrive on time. Cell phones must be turned off throughout the class period.

EVALUATION: Quizzes(5): 10% -- Homework(6): 24% -- Midterm Exams(3): 42% -- Final Exam: 24%

GRADING: NO CURVING OF ANY SCORES, as follows:

93 - 100	: A	4.00 Grade Points
90 - 93	: A-	3.67 Grade Points
87 - 89	: B+	3.33 Grade Points
83 - 86	: B	3.00 Grade Points
80 - 82	: B-	2.67 Grade Points
77 - 79	: C+	2.33 Grade Points
73 - 76	: C	2.00 Grade Points
70 - 72	: C-	1.67 Grade Points
67 - 69	: D+	1.33 Grade Points
63 - 66	: D	1.00 Grade Points
60 - 62	: D-	0.67 Grade Points
0 - 59	: E	0 Grade Points

QUALIFYING GRADE: A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For

more information on grades and grading policies, please visit:
<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

QUIZZES will be given in class and are closed book but open notes format. For exams, ONE 8.5" X 11" double-sided page of paper containing your HANDWRITTEN notes may be used during any quiz. The quizzes will be short (10-15 minutes in length) and will be announced at least one week in advance. *Absolutely No Make-Up Quizzes will be Given For Any Reason.* The quizzes are equally weighted.

HOMEWORKS are assignments done outside of class. These are INDIVIDUAL projects. Any collaboration, beyond initial working together to get the technique right, will be considered cheating. Copying *is* cheating, and will be punished severely.

Please understand that there is a not-so-subtle difference between discussing your homework with a colleague or friend and copying it wholly or in part. The former is permissible, while the latter constitutes cheating and will be dealt with accordingly (see Honesty Policy, below).

HOMEWORKS ARE DUE AT THE BEGINNING OF CLASS. LATE HOMEWORK IS PENALIZED BY TEN PERCENT OF SCORE FOR EACH **CALENDAR DAY LATE**. HOMEWORKS MORE THAN 4 CALENDAR DAYS LATE (UNEXCUSED) WILL NOT BE ACCEPTED! *It is strongly recommended that you Xerox copy or scan (as PDF) your homework and save these copies, prior to submitting it for grading, in case a page is lost.*

Homework extensions may be allowed only for documented, un- avoidable conflicts REPORTED IN ADVANCE AND ALLOWED BY THE INSTRUCTOR. Only DOCUMENTED emergency medical excuses can be accepted after a project is due.

The homeworks will all be equally weighted.

FINAL EXAM will be held during the final exam week, at a time and place announced on the web-based class schedule.

MAKE-UP POLICY:

- *Absolutely No Make-Up Quizzes will be Given For Any Reason.*
- *Homeworks may be turned in late, as discussed above. Extra-credit problems will be available on homeworks and exams to compensate for missed quizzes or late homework.*
- *Exams may be Made Up only when the student has a permissible absence (e.g., court appearance, illness or hospitalization, death of immediate family) with documented excuse.*

RETURN POLICY: Every attempt will be made to return homeworks and quizzes as soon as possible. When they are graded and recorded, they will be turned back during class. After that, any work not picked up in class will be available from the TAs. We have changed our policy from public pick-up to ensure privacy and return of your work.

HONESTY POLICY: All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

Under no circumstances will acts of academic dishonesty be tolerated. Any suspected incidents of dishonesty will be promptly referred to the Director for Student Judicial Affairs and the Student Honor Court. Refer to the pamphlet entitled *Academic Honesty, Student Judicial Process, Guide for Students*, from the Office for Student Services.

ACCOMODATION FOR STUDENTS WITH DISABILITIES: Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course Instructor when requesting accommodation.

COUNSELING SERVICES: Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- UF Counseling and Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services
- Career Resource Center, Reitz Union, 392-1601, career and job search services

SOFTWARE USE: All faculty, staff and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.
