COP3402 – Systems Software – MW 19:30-20:45 – ENG2 102

Catalog Data Design and development of assemblers, linkers, loaders and compilers. Study memory hierarchy, program performance, and system level I/O.

Textbook Aho, Lam, Sethi and Ullman, *Compilers: Principles, Techniques, and Tools* (2th Edition, 2007). Addison-Wesley. ISBN 0-321-48681-1. Errata at http://infolab.stanford.edu/~ullman/dragon/errata.html.

Supplemental Textbooks
Appel, *Modern Compiler Implementation in C* (any edition 1997 or later). Cambridge University Press.
Beck, *System Software: An Introduction to Systems Programming* (3rd edition). Pearson.
Louden, *Compiler Construction: Principles and Practice*. Cengage Learning.
Sebesta, *Concepts of Programming Languages* (8th edition or later). Addison-Wesley.

Instructor
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Prerequisites CDA3103 Computer Logic and Organization, COP3502 Computer Science I.

Course Goal and Topics To introduce you to the principles and concepts of system software:

- Compilers and interpreters
- Real and virtual machines
- Computer architecture and assemblers
- Loaders and linkers
- Macro processors
- The run-time environment
- Introduction to operating systems

Course Layout We will broadly follow the text, amplifying the topics above and further advanced topics as time permits. Discussions of system software in the real world, and its implications, will be interjected liberally.

Assignments The assignments will consist of four parts of a single programming project. Details of the project will be given separately.

Exceptions In general I will neither accept late work nor offer make-up tests. I may make exceptions with valid reason before the due date or test date. I will make exceptions on or after the due date or test date only in well-documented extreme circumstances.

Attendance Class attendance is not mandatory and I will not take roll. However, you are responsible, without exception, for all information from all class sessions, including revisions to this syllabus. Attendance to your recitation ("lab") session *is* mandatory and the teaching assistant *will* take roll.

Grading Grade scale and weights are as follows:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
90-100	88-89	86-87	80-85	78-79	76-77	70-75	68-69	66-67	60-65	58-59	0-59

Midterm Exam 1	20%	
Midterm Exam 2	20%	
Comprehensive Final Exam	25%	*60% minimum to pass the course*
Programming Project	30%	*Must complete to pass the course*
Recitation attendance	5%	*Half-point deduction for each unexcused miss*

The above criteria represent the lowest grade you will receive in the course. Other factors may raise your grade, including but not limited to overall class performance and improvement in your performance over the semester. I also may adjust the grade scale in the class's favor; I will not adjust it against the class.

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Ethics As reflected in the UCF creed, integrity and scholarship are core values that should guide our conduct and decisions as members of the UCF community. Plagiarism and cheating contradict these values, and so are very serious academic offenses. Penalties can include a failing grade in an assignment or in the course, or suspension or expulsion from the university. Students are expected to familiarize themselves with and follow the University's Rules of Conduct (see http://www.osc.sdes.ucf.edu/).

Disabilities The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. If you need accommodation, you must be registered with Student Accessibility Services in the Student Resource Center (phone number 407-823-2371, TTY/TDD number 407-823-2116). SAS will work with you to set up your accommodation, and you can either inform me of your request directly or allow them to.

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Revision I may revise any aspect of this syllabus at any time.

Dates

(Current as of 8/20/2015)

Drop	Add	Pay	Withdraw	Semester End	Our Final
R 8/27	F 8/28	F 9/4	M 11/2	M 12/7	W 12/9 19:00-21:50

Course Schedule

Unit 1: Machines and Compilers
Unit 2: Building Compilers
Unit 3: Programs and Processes

	Monday	Wednesday	
8/24	Introduction		8/26
8/31			9/2
9/7	Labor Day		9/9
9/14			9/16
9/21			9/23
9/28	Exam 1 Review	Exam 1	9/30
10/5			10/7
10/12			10/14
10/19			10/21
10/26			10/28
11/2	Exam 2 Review	Exam 2	11/4
11/9		Veterans Day	11/11
11/16			11/18
11/23			11/25
11/30			12/2
12/7	Course Review	FINAL EXAM	12/9