COP 3502.01 – Computer Science I
Spring 2004 - Syllabus

Course Prerequisites: MAC 1105
Class Meets: Tuesday & Thursday from 7:30 am - 8:40 am in BA 107

Instructor: Dr. Mark Llewellyn

Office: CCI 211 **Office Hours:** Monday & Wednesday: 12:00 – 2:00pm
Tuesday & Thursday: 9:00 – 10:00am

Phone: 407-823-2790 (voice mail available)
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Course Web Site: www.cs.ucf.edu/courses/cop3502/spr04

Course Objectives:

This course is designed to provide an introduction to the field of computing. The central concept that underlies computer science is the algorithm and thus algorithms will be the primary focus of the course. The lecture section of the course will focus on the conceptual tools necessary for constructing and analyzing algorithms, the lab sections will focus on the implementation of algorithms using a programming language. Essential algorithmic concepts and techniques are introduced in this course that will remain valid throughout your studies of computer science.

Text: The following text is required:

Programming Abstractions in C, Eric Roberts, Addison-Wesley, 1998, ISBN: 0-201-54541-1.

The text will be supplemented with notes that I will provide for you via the course web site.

Academic Dishonesty

Cheating on examinations or other serious forms of academic dishonesty will result in a grade of "F" (and a required report to University officials). Persons "borrowing" someone else's work on an assignment will receive a zero on that assignment if it is the first offense. A second offense will be considered a serious form of academic dishonesty. (Borrowing is equally subject to penalties.) You are not expected to work in isolation on assignments. Significant learning frequently takes place in the interchange of ideas with one another. In the final analysis, however, your response to an assignment must be your own, not someone else's.

Grading:

- Exams are given once – be there as there are no dropped test scores. Three exams will be given, two regular exams and a cumulative final exam.
- Programming assignments will be an integral part of the course.
- Tests are closed book and notes.
- Calculators of any sort are not allowed on exams.

- Make-up quizzes and exams are given only in the event of extreme circumstances beyond the student's control and are given at the discretion of the instructor.
- Late assignments will receive a 25% deduction from the score it would have received had it been submitted on time. The last assignment may not be submitted late.

Exam #1 (February 10th) 20%
Exam #2 (March 18th) 20%
Final Exam (Thursday April 22nd 7:00-9:50am).....25%
Programming Assignments (total of 5 or 6) 25%
Pop Quizzes in Recitation Labs 10%

Grading Scale:

Plus/minus grading will be used in this course.
90-100 = A, 88-89 = A-, 85-87 = B+, 80-84 = B, 78-79 = B-, 75-77 = C+,
70-74 = C, 68-69 = C-, 65-67 = D+, 60-64 = D, 58-59 = D-, <58 = F

Some Important Dates:

No class: Tuesday March 9th or Thursday March 11th – Spring Break
Last Day to Withdraw: Friday February 27th
Final Exam: Thursday April 22nd 7:00-9:50am

Topics To Be Covered:

1. Design of Algorithms for problem solving.
2. Brief Review of C: : Functions, pointers, files
3. Arrays
4. Recursion
5. Algorithmic Complexity: Big-Oh
6. Searching and Sorting
7. Stacks and Queues
8. Binary Trees
9. Graphs

Tentative Schedule of Lecture and Recitation Topics:

Week	Topic	Reading from Text	Lab Topic
1/5-1/9	Intro and C review	1.1-1.6	**NO LAB**
1/12-1/16	Pointers	2.1-2.3	C libraries
1/20-1/23	Records & Arrays	2.4-2.7	binary numbers
1/26-1/30	Recursion	4.1-4.5	logs
2/2-2/6	More Recursion	5.1-5.3	exam review
2/9-2/13	***Exam #1 (2/10)*** Algorithm Analysis	7.1-7.4	go over exam
2/16-2/20	Sorting	7.5	summations
2/23-2/27	Stacks	8.1-8.5, 10.1	summations
3/1-3/5	Queues	10.2-10.3	exam review
3/15-3/19	Stack/Queue Apps ***Exam #2 (3/18)***	None	go over exam
3/22-3/26	Binary Trees	13.1-13.2	group project
3/29-4/2	Expression Trees	14.1-14.3	balanced trees
4/5-4/9	Expression Trees	14.4-14.5	balanced trees
4/12-4/16	Graphs	16.1-16.3	exam review
4/20-26	***FINAL EXAM (4/26)***	None	None

Recitation Labs:

You are required to attend one recitation lab per week. This semester these labs are on Friday. The topic for each week's lab is shown in the table above. Quizzes are given in the lab sections not in the lecture section. Lab instructors will also have office hours during which they can assist you with your course assignments. Their office hours will be posted on the course website once they become available.

Lab Sections:

Section 11 – 7:30-8:20am – ENG 227
Section 12 – 8:30-9:20am – ENG 383
Section 13 – 8:30-9:20am – ENG 227
Section 14 – 8:30-9:20am – ENG 302
Section 15 – 9:30-10:20am – ENG 227
Section 16 – 1:30-2:20pm – ENG 227
Section 17 – 2:30-3:30pm – ENG 227
Section 18 – 3:30-4:20pm – ENG 227