COURSE SYLLABUS

COP 4531 Complexity and Analysis of Data Structures and Algorithms
Fall Semester 2015

TIME AND LOCATION
T/Th 3:35PM-4:55PM
DSL 499

COURSE PERSONNEL
Instructor: Margareta Ackerman
Office hours: Tues 2-3:25pm, LOV 264
mackerman[AT]fsu[DOT]edu

Teaching Assistant:
Sam Kiswani
Office hours: Wed 3-4, Thur 11-12, LOV 020
ssk09c[AT]my[DOT]fsu[DOT]edu

Jarrod Moore
Office hours: Mon/Wed 11:15-12:15, Major's Lab
jdm10c[AT]my[DOT]fsu[DOT]edu

COURSE WEBSITE:
http://www.cs.fsu.edu/~ackerman/COP4531.html

CLASS MAILING LIST
Announcements for the course, homeworks, reading assignments, programming projects will be 
available using the blackboard (http://campus.fsu.edu). Make sure you check both the course 
web site and blackboard at least once in two-three days throughout the semester.

EXAMS
Midterm: October 15th, in class.
Final exam: Monday, Dec 7th 5:30-7:30

COURSE RATIONALE
Algorithms is a fascinating topic that is ubiquitous in computing. Algorithms are recipes for 
solving computational problems. This course aims at encouraging you to think efficient and 
clever solutions to problems that computer engineers and scientists attack in their day to day 
lives. The course also aims to teach you how to analyze the solutions you come up with (in 
terms of resources they use to solve the problem at hand), and to check if they are correct in a 
mathematically rigorous manner. This course involves understanding, creativity and 
analysis.
COURSE DESCRIPTION
Algorithms is an integral part of computer science and mathematics. So far, you have acquired proficiency in basic data structures and programming. This course is the next step towards becoming an algorithm designer for the real world. We plan to cover the following topics in this course (tentative).
• Asymptotic notation
• Graph Algorithms
• Greedy Algorithms
• Divide and Conquer
• Dynamic Programming
• Greedy Algorithms
• Basic clustering
• Complexity classes

COURSE PREREQUISITES
This is a capstone course in our curriculum. The prerequisite tree is as follows:

COP4531
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COP4530 MAD3105 STA3032/STA4442
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COP3330 CDA3100 MAD2104 MAC2312
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COP3014 COP3344 MAC2311

The supporting courses constitute a significant and deep body of knowledge that is assumed as a base from which to build COP 4531. These prerequisites will be enforced. Students not having credit for these prerequisite courses must have special permission from the instructor or be dropped from the class.

COURSE OBJECTIVES
The objective of this course is to encourage you to learn how to:
• design and implement ‘new’ algorithms in the real world
• read and understand algorithms
• develop writing skills to present your own algorithms

COURSE MATERIALS

EVALUATION
Assignments: 40%
Midterm: 20%
Final: 40%
COURSE GRADE
Marks will be calculated out of 100 and converted to letter grades as follows.

A    85-100
A-   80-84
B+   77-79
B    73-76
B-   70-72
C+   67-69
C    63-66
C-   60-62
D+   57-59
D    53-56
D-   50-52
F    0-49

Undergraduate students need to earn a C- or higher to pass the course.
Graduate students need to earn a B- or higher to pass the course.

COURSE POLICIES:

FIRST DAY ATTENDANCE POLICY
Official university policy is that any student not attending the first class meeting will be automatically dropped from the class.

MISSED EXAM POLICY
A missed exam will be recorded as a grade of zero. We will follow the university rules regarding missed final exams (see v), for all the exams, including the final exam.

LATE POLICY
Once a term, you may submit an assignment on the Monday following the deadline at 11:15am, bringing the assignment to Jarrod Moore’s office hours (Major’s Lab).
• The last assignment cannot be submitted late
• There is will no penalty for one late submission
• All other assignments must be submitted by the deadline in order to receive credit

ACADEMIC HONOR POLICY:
Because a primary goal of the course is to teach professionalism, any academic dishonesty will be viewed as evidence that this goal has not been achieved, and will be grounded for receiving a grade of F (You must read the FSU Academic Honor Code in the Student Handbook and abide by it). Copying/Modifying other people’s programs/code will be treated the same as copying in an exam.

• Every student must write his/her own code and homework. Showing your code or homework to members of other teams, giving it to them, or making it accessible to them (e.g., by making the files world-readable) is academic dishonesty.
• You are responsible for ensuring that your code/documentation/results/homeworks are adequately protected and not accessible to others. Change permissions of your working directory to 0700 (chmod 0700 {directory}).

• Consulting code from a textbook, or from the Internet, in order to understand specific aspects of your assignment is fine. However, copying entire code or large parts of such code will be considered academic dishonesty. If you borrow small parts of code from these sources, you must acknowledge this in your submission and additionally you must clearly understand and be able to explain how the code works.

Penalty for academic dishonesty will involve a mark of 0 for the assignment, midterm or final exam on which the academic dishonestly occurred, in addition to a full letter grade reduction in the course grade.

AMERICANS WITH DISABILITIES ACT:
Students with disabilities needing academic accommodation should:
(1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center
874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
http://www.disabilitycenter.fsu.edu/

(This syllabus and other class materials are available in alternative format upon request.)

EMERGENCY MANAGEMENT INFORMATION:
Information regarding the status of FSU in an emergency situation may be obtained from the following sources:

For information specific to the Panama City Campus go to the FSUPC web page at http://www.pc.fsu.edu/ or call the Campus Hotline number 850-770-2000
For information related to FSU in general and the Tallahassee Campus go to the FSU alerts web page at http://www.fsu.edu/~alerts/
For state-wide and national information, go to the Florida Division of Emergency Management information pages at http://www.floridadisaster.org/
Any specific information related to this class will be posted on the course web site or sent via email to your fsu email address.
SYLLABUS CHANGE POLICY:
Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice. Such notice will be in the form of a posting to the course web site on campus.fsu.edu.