Syllabus for Analysis of Algorithms (Honors)
CSPC 311-200, Fall 2005

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Web page. `http://faculty.cs.tamu.edu/klappi/cpsc311h/cpsc311h.html`
Venue. HRBB 104
Time. The class meets MWF 10:20am–11:10am (subject to change)

This course discusses fundamental data structures and algorithms. The goals of this course include correctness proofs of algorithms and the analysis of algorithms. Basic design techniques for algorithms, such as divide and conquer, dynamic programming, and greedy algorithms, will be explored. This course will conclude with an introduction to complexity theory.

Prerequisites. CPSC 211, Math 302, C or C++ programming

Textbook. Cormen, Leiserson, Rivest, Stein, *Introduction to Algorithms*, 2nd edition, McGraw-Hill, 2001. For selected topics, additional lecture notes will be provided.

Grading. Exam 1 15%, Exam 2 15%, Exam 3 20%, Homework 35%, Quizzes 10%, Culture 5%.

Grading Scale. The grades will be assigned according to the scale

A [90−100%], B [80−89%], C [70−79%], D [60−69%], F otherwise.

If the class grade average is below the expectated value, then the cutoffs might be lowered. Grades must be earned and are not negotiable.

Make up exams. Make up exams will only be given for university excused absences (handed in before the exam). Typically, make up exams will be administered as oral exams.

Scholastic Dishonesty. Discussion of solutions is encouraged, but all assignments and exams must be done on your own, unless instructed otherwise. You are required to list all sources other than the textbook and the lecture notes. In exams, receiving and providing information to and from others will be considered as cheating. Cheating will be punished with lower grades, up to F^* for the overall course. You are expected to know the *Texas A&M University Student Rules*, especially the sections on *Scholastic Dishonesty*, see http://student-rules.tamu.edu/. You are expected to know what is considered cheating in Computer Science.

Course Goals. At the end of the semester you should i) be familiar with fundamental algorithms and algorithmic techniques, ii) be able to decide which algorithm among a set of possible choices is best, iii) be able to prove correctness and analyze the running time of a given algorithm, iv) be able to design efficient algorithms for new situations using the techniques learned, v) be able to prove a problem is NP-complete using reduction and understand the implications.

Students with Disabilities. According to the federal law, all students with disabilities have to have a special learning environment. For more information, please contact the Office of Support Services for Student with Disabilities in Room 126 of the Koldus Building. Their phone number is 845-1637.