

## CSE 550 Combinatorial Algorithms and Intractability    Fall 2007

**Class time and place:** TuTh 10:30–11:55, BYAC 240

**Instructor:** Goran Konjevod ([goran@asu.edu](mailto:goran@asu.edu))

Office hours: MW 10:30–12:00 (BY450)

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Office hours: TBA

**Web site:** <http://thrackle.eas.asu.edu/cse550>

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**Course description.** This is a graduate course in algorithms. The topics covered will include graph algorithms (minimum spanning trees, shortest paths, network flows, matchings, connectivity, matroids, linear and integer programming and their applications to solving combinatorial optimization problems, heuristics (branch-and-bound etc), dynamic programming, some advanced data structures (search trees, heaps, persistent and cache-oblivious data structures), some topics on planar graphs, string and compression algorithms and some topics from computational geometry.

No specific textbook will be used, and instead there will be class notes and various handouts to guide your reading.

**Assignments and grading.** There will be weekly homework assignments (14 of them) during the course, a take-home midterm and final exam. The breakdown of the grade will be: homework 50%, midterm 20% each, final exam 30%. In addition, a programming assignment or project can be taken for extra credit. **No late homework will be accepted.** No exceptions will be made to this rule. If you have concerns about arriving to class on time, you may hand in the homework early, either directly to the instructor, or through the Blackboard system. Graded homework will be returned a week later in class. You must solve the homework problems on your own. You may discuss the homework problems with your classmates, but you may not discuss solutions (there is a clear distinction between these two things). You must write up your own solutions independently.