CS 381 Intro to the Analysis of Algorithms
Purdue University, Fall 2014

1 Basic info

Instructor: Elena Grigorescu, *elena-g@purdue.edu.*

Teaching assistants Nabeel Butt, *butt@purdue.edu;* Akash Kumar *akash.mnnit@gmail.com*

Time/location: Tu/Th 12-1:15 pm, Beering Hall of Lib Arts& Ed 2280.

Website: http://www.cs.purdue.edu/homes/egrigore/381FT14/

Text: Introduction to algorithms, T. Cormen, C.Leiserson, R. Rivest, C. Stein. 3rd edition. MIT

Office hours: Check class website

2 Description

The course gives an introduction to the design and analysis of algorithms. A tentative list of topics includes: sorting and order statistics; common algorithm design techniques including divide-and-conquer, dynamic programming, and greedy; design and use of data structures; lower bound techniques, graph algorithms, NP-completeness, randomized algorithms, approximation algorithms.

3 Homework instructions

The homework assignment will be posted on Blackboard. The homeworks are due *before class* on the due date, in hard copy. No extensions or late homeworks will be granted.

Write each problem on *a separate sheet* of paper (we might separate your problems for grading purposes). Try to be as concise as possible in presenting your solution.

If you do not know the solution to a problem you'll receive 15% of the grade if you write"I do not know how to solve this problem" on the solution sheet and nothing else. Otherwise, your solution will be graded according to its content.

Grading and Regrading You are responsible to complete the entire homework assignment. We might pick only a subset of the homework problems in each assignment for grading (the subset picked will not be known to you in advance.) The solutions to homeworks will become available to you on Blackboard.

For a re-grade on a homework contact the TA responsible for the question within 10 days from the date when the assignment was officially returned. No re-grading after this period. A re-grade means that the entire assignment undergoes a re-grade.

Homework collaboration policy You may discuss the problem sets with other students *in the class*, however you *must* write up the solutions yourself. If you collaborate, *specify who you worked with.* **No other solution sources are allowed.** Late homework will receive a score of zero, except in extraordinary circumstances in accordance with Purdue policy.

Exams and quizzes All exams are closed book and closed notes. There will be an evening Midterm exam and a Final exam, plus biweekly (possibly unannounced) quizzes. No make-up exams/quizzes.

4 Cheating/plagiarism

Cheating/plagiarism will be subject to Purdue's academic integrity policies (check links on class website). In accordance with the Purdue University Department of Computer Science Academic Integrity Policy, any instance of academic dishonesty on an exam, or assignment will be reported to the Dean of Students Office.

Penalties:

1. A first instance of academic dishonesty will result in a zero for that assignment plus a letter grade deduction at the end of the semester.
2. A second instance of academic dishonesty will result in a grade of F.

5 Grading

15% homeworks (biweekly Psets) 15% quizzes (possibly unannounced, expect biweekly) 35% midterm 35% final.

6 Emergency preparedness

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Here are ways to get information about changes in this course.

1. Course website: https://www.cs.purdue.edu/homes/egrigore/381FT14/
2. Instructor's email: elena-g@purdue.edu
3. Instructor's phone: 765 496 1185