Purdue University. **CS 580 Algorithm design and analysis** Aug 21, 2017

Syllabus

*Lecturer: Elena Grigorescu*

# 1 Basic info

Place and time: 4:30 pm - 5:45 pm, MW, Lawson Computer Science Bldg B155
Instructor: Elena Grigorescu, elena-g@purdue.edu; Office hours: Mon 9:30-10:30 am LWSN 1209.
TAs: Nima Darivandpour: jdarivan@purdue.edu. Office Hours: TBD
Young-San Lin: nilnamuh@gmail.com. Office Hours: TBD

**Description** A tentative list of topics includes scheduling problems, minimum spanning tree problems, data compression, network flow, NP and computational intractability, approximation algorithms, randomized algorithms, sublinear algorithms.

**Prerequisites** Undergraduate algorithms (CS 381). Mathematical maturity.

**Grading** 20% for homework, 20% for the midterm 1, 20% for midterm 2, 35% for the final, 5% for class participation (good answers on piazza will be rewarded.)

# 2 Assignments and Exams

**Instructions** There will be weekly or biweekly Psets, due in hard copy, at the beginning of class. You are responsible to complete the entire homework assignment. The assignments and the solutions will be posted on Blackboard.

Your solutions should be *typed* in any text editor you prefer (LaTeX, Word, etc). You will find pointers on LaTeX on the class website.

Write each problem on *a separate sheet* of paper (we might separate your problems for grading purposes). Write your solutions as succinctly as possible while including all the necessary details.

Please ask your questions on piazza.com (http://piazza.com/purdue/fall2017/cs580) and answer your colleagues' questions to receive bonus points.

Some assignments might have an optional problem. The optional problem does not count towards your score, unless your grade will be a borderline case.

If you don't know the answer to a question you will receive 15% of the grade for the problem if you admit it up-front by writing "I don't know how to solve this problem" and nothing else. If your solution is wrong you get a score of 0 for that problem. This option does not apply to the optional problem.

**Late homework** A homework submitted after the deadline is considered **late**. If it is still returned by 3pm on the Thursday of the week when the homework is due we will grade it with 2 points subtracted from each of the graded problems. After this late deadline we will not grade your homework and you receive a score of 0 for it.

**Grading and Regrading** 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.

**Exams** All exams are closed book and closed notes. There will be no make-up exams, unless they are in accordance to Purdue policies.

**Collaboration policy** You may collaborate on your homework with your colleagues *from the class*, however you *must* write down the solutions yourself. Please specify who you talked to. *No other sources are allowed and violations will be penalized according to Purdue's integrity policies.*

## 3 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 score of 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.

## 4 Posting class material

Posting materials associated to the class (e.g., solutions to homework and exams, etc) without the written permission of the instructor may be a violation of copyright.

## 5 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. **Course website:** https://www.cs.purdue.edu/homes/egrigore/580FT17/ , **Instructor's email:** elena-g@purdue.edu, **Instructor's phone:** 765 496 1185