Illinois Institute of Technology
Department of Computer Science

Reading Assignments

CS 430 Introduction to Algorithms
Fall Semester, 2014

All reading assignments are from the text, *Introduction to Algorithms*, 3nd edition, by Thomas Cormen, Charles Leiserson, Ronald Rivest, and Clifford Stein, MIT Press, 2009.

You should have done the reading *before* the day in which that subject is covered. These reading assignments are very important for understanding the lectures and homework; plan to read, reread, and re-reread everything!

Lecture notes will be made available after each lecture; they are fragmentary, however, and cannot substitute for attending the lectures.

1. August 25—Review: Chapters 1–4, notes

2. September 3—Sorting: Chapters 6–9

3. September 17—Binary search trees: Chapters 12–13, omitting section 12.4

4. September 24—Augmenting data structures: Chapter 14

5. September 29—Exam 1

6. October 1—Dynamic programming: Chapter 15

7. October 8—Greedy algorithms: Chapter 16, omitting sections 16.4 and 16.5

8. October 15—Amortized analysis: Chapter 17

9. October 22—Heaps: Chapter 19

10. October 29—Exam 2

11. November 3—Disjoint sets: Chapter 21; section 21.4 optional

12. November 5—Graphs: Chapters 22–25, omitting section 25.3

13. November 17—NP-completeness: Chapter 34

14. December 1—Approximation Algorithms: Chapter 35, sections 35.1 and 35.2 only

15. December 3—Exam 3

The dates will be adjusted if the class goes more quickly or more slowly than anticipated.

Warning!

The text is *very* dense and cannot be read lightly with any significant comprehension. Plan on reading and then re-reading the material before the lecture, and then reading it again, very slowly, after the lecture.