Institut for Matematik og Datalogi
Syddansk Universitet

May 3, 2016
JFB

DM553 – Complexity and Computability – 2016
Lecture 17

Lecture, April 28

We covered sections 35.1 and 35.2 of CLRS and introduced the set-covering problem from setion 35.3.

Lecture, May 2

We will finish with approximation algorithms from chapter 35.

Lecture, May 9

We will cover weighted vertex cover using linear programming from section 35.4. Then, we will introduce some heuristics for NP-hard problems.

Problems to be discussed in U14 on May 10

Do the following problems in CLRS:

1. 35.3-1, 35.3-2, 35.3-5 (consider the central binomial coefficient).
2. 35.5-1, 35.5-2, 35.5-3 (uses calculus), 35.5-4.
3. 35-1. (For part (a), you might consider reducing from the set-partition problem which is defined in exercise 34.5-5. Note that First-Fit actually has an approximation ration better than 2, but that result is harder to prove.)