Survival Guide for 02105 Algorithms and Data Structures 1

Philip Bille   Inge Li Gørtz

About the Guide   This note is a short survival guide to the most important things you need to know about 02105 Algorithms and Data Structures 1.

Book   We mainly use the book "Introduction to Algorithms", 4th edition (CLRS), Cormen, Leierson, Rivest, and Stein. See the course homepage for additional materials.

Weekly Structure   The homepage organizes material and exercises together in a single week. The schedule organizes exercise classes for the following week before the next lecture. More precisely, each week proceeds as follows:

8.00-10.00 Exercise class with TAs on material from the previous lecture.

10.00-10.45 Walkthrough of selected exercises (from the above exercise class).

10.50-12.00 Lectures on new material.

The very first exercise class of the semester is listed as "week 0" (since there is no corresponding lecture). The weekplans, materials, rooms, etc., are on the course homepage.

Exercises   Before an exercise class, familiarize yourself with all the exercises and work on at least half of them. Do not expect to have time to solve all the exercises during class. Work on the exercises in your preferred order and focus on weak points in your understanding. Some exercises are marked with a short code in [ ], which means the following:

- $[w]$ A warmup exercise. These should be easy if you have understood the material for the week.

- $[*]$ and $[**]$ A difficult and a very difficult exercise, respectively. These exercises usually require clever and creative insights to solve. Work on these after you have solved the other exercises.

- $[\dagger]$ An exercise that involves programming.

Hand-in Exercises   During the course, we will post several (non-mandatory/voluntary) hand-in exercises. See the homepage for details of the hand-in exercises.

Programming   You can use any standard imperative programming language (e.g., Python, Java, C, C++) for the implementation exercises. The default programming language is Python.