

Survival Guide for 02105+02326 Algorithms and Data Structures

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About the Courses This note is a short survival to the most important things you need to know about *02105 Algorithms and Data Structures 1* and *02326 Algorithms and Data Structures*.

Structure Lectures are joint for both courses, while exercise classes are separated into BSc. and BEng. classes. Exercise classes are at 8.00-10.30 and lectures are at 10.45-12.00. For each week, there is a weekplan listing the reading and exercises. The reading for week x is the topic for the lecture in week x and the exercises for week x are covered at the exercise classes in week $x + 1$. For instance, at the first session of the semester you'll work on the exercises in weekplan 0 and prepare for the lecture covering the readings listed on weekplan 1.

Exercises The order of the exercises on the weekplan is *not* important. Work on the exercises in your preferred order. Do the exercises that challenges you the most at the end and spend little time on the exercises that are particularly easy for you. We expect that you have work on all exercises before the exercise class and that you have solved most of them.

Some exercises are marked with a short code i [], which means the following. Exercises targeted at BEng or BSc students are marked with [BSc] or [BEng] (feel free to solve both!). The difficulty of the exercise may be indicated with [w]. [*], or [**], which means warmup exercise, a challenging exercise, and a particularly challenging exercise, respectively. Warmup exercises should be easy if you've mastered the topic for that week. Finally, [†] means that the exercise is available on CodeJudge. For instance,

- [BSc] This exercise is targeted at BSc students.
- [*†] This exercise is challenging and you can check your solution on CodeJudge.

Mandatory Exercises There are two types of mandatory exercises. The *mandatory implementation exercise* are about implementing solutions to algorithmic challenges. These need to be submitted to the CodeJudge system, which then checks them. The *mandatory written exercises* are about designing, analysing, and describing algorithms. These need to be submitted to a teaching assistant, who will then grade them and provide feedback. All mandatory exercises are individual and are graded passed/not passed. A specific number of the types of mandatory exercises are needed to participate in the exam. See the homepage for full details, including hand-in procedures, deadline, requirements, etc.

Exercise Classes For the exercises in the first week, just show up and participate on any of exercises classes. Pick a class that is not overly crowded. The full list of exercise classes are listed on the homepage. During the first lecture you sign up for one the two types of exercise classes:

Group Work Exercise Class Approximately 3/4 of the time is used for group work on exercises. The remaining 1/4 of the time is used for student whiteboard or blackboard presentation of solutions and discussion. The teaching assistant supports the group work and facilitates the presentation and discussion.

Presentation Exercise Class Just as the group work exercise class except that approximately only 1/4 of time is used for group work, and the remaining time is used for presentation and discussion.

The presentation exercise class impose extra demands on your preparation and effort in the course, but in return you get the opportunity to gain a deeper insight into the material and learn more. Conversely, if you are not prepared enough to actively present exercises and participate in discussions you will not get benefits of the presentation exercise class. In this case we recommend the group work exercise class.