

| Week   | Content (tentative plan, color of INF102 is green)                   |
|--------|--|
| 34.L1  | Queues and Stacks  |
| 34.L2  | Resizing Arrays and Linked Lists                                     |
| 35.L1  | Analysis of Algorithms   |
| 35.L2  | Union-Find   |
| 35.W   | Exc. from 1.3: 3, 4, 5, 12, 13; from 1.4: 5, 6, 8                    |
| 36.L1  | Elementary Sorts   |
| 36.L2  | Mergesort  |
| 36.W   | Exc. from 1.4: 12, 14, 24; from 1.5: 8, 9, 12, 14                    |
| 37.L1  | Quicksort  |
| 37.L2  | Priority Queues  |
| 37.W   | Exc. from 2.1: 8, 10, 14, 15, 25; from 2.2: 4, 8, 21, 28             |
| 38.Ho1 | Hand out first compulsory assignment                                 |
| 38.L1  | Applications of Sorting  |
| 38.L2  | Symbol Tables  |
| 38.W   | Exc. from 2.3: 2, 4, 6, 15, 25; from 2.4: 4, 7, 8                    |
| 39.L1  | Binary Search Trees  |
| 39.L2  | No lecture   |
| 39.Dl1 | Deadline first assignment  |
| 40.L1  | Balanced Binary Search Trees I (2-3 search trees)                    |
| 40.L2  | Balanced Binary Search Trees II (red-black search trees)             |
| 40.W   | Exc. from 2.4: 18, 29; from 2.5: 1; 3.1: 13, 14, 31                  |
| 41.Ho2 | Hand out second compulsory assignment                                |
| 41.L1  | Hash Tables  |
| 41.L2  | Applications of Searching  |
| 41.W   | Exc. from 3.2: 1, 4, 6, 13, 18, 24, 27; from 3.3: 1, 2               |
| 42.L1  | No lecture   |
| 42.L2  | Summary Chapters 1, 2, 3   |
| 42.Dl2 | Deadline second assignment   |
| 43.L1  | Undirected Graphs, Representation and Depth-first search             |
| 43.L2  | Breadth-first search, Connected components and Degrees of separation |
| 43.W   | Exc. from 3.3: 4, 9; from 3.4: 1, 12, 13, 23, 31, 38                 |
| 44.L1  | Directed Graphs, Depth first search and Topological Sort             |
| 44.L2  | Prim's Algorithm   |
| 44.W   | Exc. from 4.1: 1, 2, 9, 10, 12, 16, 33, 38; from 4.2: 4, 7           |
| 45.Ho3 | Hand out third compulsory assignment                                 |
| 45.L1  | Kruskal's Algorithm  |
| 45.L2  | Weighted Graphs and Dijkstra, Bellman-Ford                           |
| 45.W   | Exc. from 4.2: 10, 27, 28, 32, 39, 42; from 4.3: 1, 3, 4, 6          |
| 46.L1  | Summary Chapter 4  |
| 46.L2  | No lecture   |
| 46.Dl3 | Deadline third assignment  |
| 47.Li  | Repetition and Old Exams   |
| 47.W   | Exc. from 4.3: 8, 12, 19, 39; from 4.4: 1, 8, 15, 16, 24, 25         |
| 48     | Q&A, Exam XYday Z December   |