COMP 251. ALGORITHMS AND DATA STRUCTURES.

Credits: 3

Offered by: Computer Science (Faculty of Science)

Terms offered: Fall 2025, Winter 2026

View offerings for Fall 2025 or Winter 2026 in Visual Schedule Builder.

Description

Data Structures: priority queues, balanced binary search trees, hash tables, graphs. Algorithms: topological sort, connected components, shortest paths, minimum spanning trees, bipartite matching, network flows. Algorithm design: greedy, divide and conquer, dynamic programming, randomization. Mathematicaltools: proofs of asymptotic complexity and program correctness, Master theorem.

- Restrictions: Not open to students who have taken or are taking COMP 252.
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- 3 hours
- Prerequisites: COMP 250; MATH 235 or MATH 240
- COMP 251 uses basic counting techniques (permutations and combinations) that are covered in MATH 240 but not in MATH 235. These techniques will be reviewed for the benefit of MATH 235 students.
- Restrictions: Not open to students who have taken or are taking: COMP 252 or COMP 260.