

COURSE DETAIL

ALGORITHMS, DATASTRUCTURES, AND COMPLEXITY

Country

Sweden

Host Institution

Lund University

Program(s)

Lund University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Engineering Computer Science

UCEAP Course Number

101

UCEAP Course Suffix**UCEAP Official Title**

ALGORITHMS, DATASTRUCTURES, AND COMPLEXITY

UCEAP Transcript Title

ALGRTHM&DATA STRCTR

UCEAP Quarter Units

4.00

UCEAP Semester Units

2.70

Course Description

Algorithms and data structures are fundamental in computer science. Data structures are used to model reality and the choice of data structures affects the efficiency of algorithms. This course gives students knowledge of advanced data structures for abstract models and advanced graphs. Students also obtain improved knowledge of algorithms, particularly graph algorithms. The course also gives students knowledge of: techniques for analyzing algorithms with respect to performance; graphs and graph algorithms; data structures for graphs; problem solving strategies such as divide and conquer, greedy algorithms and brute force; techniques for analyzing the time complexity of algorithms; introduction to the complexity classes P and NP, computability and the Church-Turing thesis.

Language(s) of Instruction

English

Host Institution Course Number

EDAF05

Host Institution Course Title

ALGORITHMS, DATASTRUCTURES, AND COMPLEXITY

Host Institution Course Details

<http://cs.lth.se/edaf05/>

Host Institution Campus

Engineering

Host Institution Faculty

Host Institution Degree

Host Institution Department

Engineering- Computer Science

Course Last Reviewed

2020-2021

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