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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