

## T-61.5060 ALGORITHMIC METHODS OF DATA MINING (5 cr) L P

<http://www.cis.hut.fi/Opinnot/T-61.5060/>

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26 + 26 (2 + 2) I-II

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Lectures: Lecture hall T2 Mondays at 10-12, the first lecture will be on September 15th.

Exercises: T2 Thursdays at 16-18.

Passing the course: Examination and a practical work.

Required preliminary knowledge: [T-106.1220 Data Structures and Algorithms](#), two years worth of mathematics.

Language: English, All course material will be in English.

Lectures and exercises are held in TKK's Tietotalo (Konemiehentie 2, Otaniemi).

### Material

The book H. Mannila, H. Toivonen, "Knowledge discovery in databases: the search for frequent patterns" ([PS](#), [PDF](#)). Available also in a printed form for copy-taking. See the course's web page for more.

### Contents

The course will go through general questions in data mining such as pattern finding from data, clustering and approximating probability distributions. The course concentrates especially in analyzing discrete data using algorithmic techniques.

Summary of the course contents:

1. Data mining: overview of the field
2. Finding association rules
3. Frequent episodes
4. The knowledge discovery process
5. Discovery of all frequent patterns
6. Basics of cluster analysis
7. Link analysis: basic ideas

The course will contain a moderately easy practical work of writing summaries of given articles.

For more information go to the course's web page at:

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