UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Data Mining A1N

7.5 credits

Course code: IT734A
Version number: 6
Valid from: 1 January 2023
Ratified by: Curriculum Committee for Informatics
Date of ratification: 15 August 2022

1. General information about the course

The course is provided by the University of Skövde and is named Data Mining A1N (Data Mining A1N). It comprises 7.5 credits and is a second-cycle course. The level of progression is A1N.

The course is a part of the main field of study in Informatics. The disciplinary domain of the course is Technology.

2. Entry requirements

A Bachelor's degree equivalent to a Swedish kandidatexamen of 180 credits (or the equivalent).

A further requirement is proof of skills in English equivalent of studies at upper secondary level in Sweden, known as the Swedish course English course 6. This is normally demonstrated by means of an internationally recognized test, e g IELTS, TOEFL or the equivalent

3. Course content

This course provides an introduction and specialization in data mining with focus on classification, association analysis and cluster analysis. The course aims to give students an understanding of the use, benefits and limitations of data mining and to give deeper knowledge so that students will be able to further develop and apply data mining algorithms to new problems. The course also aims to give students practical knowledge about data mining, and contains a number of labs and a smaller individual data mining project.

4. Objectives

After completed course the student should be able to:

- critically reflect and describe utility, problems and limitations of data mining;
- critically reflect and describe data mining algorithms within classification, association analysis and cluster analysis, with respect to application and structure;
- implement and explain basic data mining algorithms;
- identify and describe problems where data mining is relevant, and select suitable data mining algorithms for solving such problems; and
- analyze, compare and evaluate results and usage of data mining algorithms.

5. Examination

The course is graded A (Excellent), B (Very good), C (Good), D (Satisfactory), E (Sufficient) or F (Fail).

The examinations of the course consist of the following modes of assessment:

- **Supervised written examination**
  4.5 credits, grades: A/B/C/D/E/F (determines the final grade)
- **Laboratory assignment**
  1.5 credits, grades: G/U
- **Written assignment**
  1.5 credits, grades: G/U

Students with a permanent disability who have been approved for directed educational support may be offered adapted modes of assessment.

6. Types of instruction and language of instruction

The teaching is comprised of lectures, laboratory sessions and project work.

The teaching is conducted in English.

7. Course literature and other educational materials

Tan, P-N., Steinbach, M. & Kumar, V. (2013). *Introduction to data mining: Pearson new international edition*.. Harlow, Essex: Pearson Education Limited. ISBN 9781292026152.

Articles according to a reference list on the learning platform.

8. Student influence

Student influence in the course is ensured by means of course evaluation. The students are informed about the results of the evaluation and potential measures that have been taken or are planned, based on the course evaluation.

9. Additional information

Further information about the course, as well as national and local governing documents for higher education, is available on the website of the University of Skövde.