UNIVERSITY OF BORÅS

Data Mining
Data Mining
7.5 credits

Ladok Code: 22DM1D
Version: 4.1
Established by: Committee for Education in Librarianship, Information, and IT 2016-11-08
Valid from: Spring 2017

Education Cycle: Second cycle
Main Field of Study (Progressive Specialisation): Informatics (A1N)
Disciplinary Domain: Natural sciences
Prerequisites: Passed courses of 7.5 credits in Mathematics/Statistics or attending the course Business Intelligence 1, 7.5 credits or something similar.
Subject Area: Informatics/Computer and Systems Sciences
Grading Scale: ECTS-credits

Content
The course gives a general introduction to data mining by covering: data mining methodology, preprocessing of data and data quality aspects, data mining techniques, result analysis and evaluation methodology, web-mining, and practical work with modern data mining tools.

Learning Outcomes
After having finished the course, the student is expected to
Knowledge and understanding
1.1. be able to give an account of the discussed data mining techniques can be applied and how they work,
1.2. be able to give an account of the data mining methodology,
1.3 formulate and analyze reports and read research articles about studies on data mining,

Competence and skills
2.1. being able to use the discussed data mining techniques in practice,
2.2. identify problems for which data mining is appropriate to use,
2.3. being able to formulate a methodological description on how the problem ought to be solved,
2.4. being able to select appropriate evaluation methods based on the data mining task at hand and

Judgment and approach
3.1. analyse results achieved when using the data mining techniques discussed in the course

Forms of Teaching
Teaching is done through lectures, seminars, workshops, laborations and assignments.

The language of instruction is English.

Forms of Examination
- Exam: written exam
Learning outcomes 1.1, 1.2, 2.2, 2.3 and 2.4
Credits: 3.0
Scale: A/B/C/D/E/Fx/F

- Assignment: Written group assignment
Learning outcomes 1.1, 1.2, 1.3 and 2.2
Credits: 1.5

Betygskala: pass or fail

- Laboration: predictive modelling group assignment
Learning outcomes 1.3, 2.1, 2.2, 2.3, 2.4 and 3.1
Credits: 1.5
Betygskala: pass or fail

- Laboration: descriptive modeling group assignment
Learning outcomes 1.3, 2.1, 2.2, 2.3, 2.4 and 3.1
Credits: 1.5
Betygskala: pass or fail

The grade on the entire course is set based on the grade achieved on the "written exam", provided that all other assignments are graded at least E.

Student rights and obligations at examination are in accordance with guidelines and rules for the University of Borås.

Literature and Other Teaching Materials

The course literature is in english.

Linoff, G. S., & Berry, M. J. A. (2011 or latest edition). Data mining techniques for marketing, sales and customer relationship management. John Wiley & Sons.

Silipo, R. (n.d.) KNIME Beginner's luck: A guide to KNIME data mining software for beginners. KNIME Press.

Student Influence and Evaluation

The course is evaluated in accordance with the school's guidelines, in which students' views will be obtained. The results of the evaluation will be published and fed back to participating and prospective students in accordance with the school's guidelines, and will provide the basis for future course and program development.

Miscellaneous

This course is taken as part of the marketing specialization of the Business Administration Programme and as part of the Masters of Informatics Programme.

This syllabus is a translation from the Swedish original.