ME1316 Quantitative Business and Operations Analytics 6.0 credits

Kvantitativ affärs- och verksamhetsanalys

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

On 11/04/2019, the Dean of the ITM school has decided to establish this official course syllabus to apply from spring term 2020 (registration number M-2019-0795).

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

ME1314/ME1305 Introduction to Industrial Engineering and Management, or the equivalent and 45 credits in CINEK programme .

Participated in the teaching of SF1901 or the equivalent; final results need not be reported

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Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

To provide the course participants applied knowledge of quantitative data analysis in different types of industrial activities. The aim is that the course participants should be prepared on completion of the course to both carry out analyses completed by others, interpret the results of these analyses and to review analyses critically. After passing the course, the students should be able to:

1. Give an account of the importance of quantitative analyses in business.

2. Apply quantitative analytical methods on operational data such as production data, customer data and product data. Basic descriptive and predictive analysis is required to pass. For higher grade, demonstrated ability to process data systematically and carry out statistical analyses is required adapted to the issue.

3. Interpret result of statistical analysis in an business context. For higher grade, good demonstrated ability to understand the result of the analysis in the specific activities that is studied is required.

4. Give an account of assumptions and limitations in a completed analysis. This includes both analysis of data quality and the assumptions and limitations of the methods.

Course contents

This course intends to give the students an understanding of how quantitative analyses can be used in business. In an increasingly digitalised world is predicted that the importance of these skills will increase. The course focuses on the application of statistical methods to carry out business and operations analyses based on large datasets. The course consists of two parts. Firstly, the students' ability to analyse and present data in an industrial context is be developed. Secondly, the students' ability to review critically, both their own analyses and those of others, through discussions of limitations and assumptions, both in methods and in data.

The course is assessed through attendance in seminars, group project where the students ??? and an individual examination.

Examination

- SEM1 - Seminar assignment, 1.0 credits, grading scale: P, F
- INL1 - Assignment, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Exam, 2.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.