ML1111 Business Control with Applied Statistics 9.0 credits

Verksamhetsstyrning med tillämpad statistik

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

Establishment

Course syllabus for ML1111 valid from Autumn 2017

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

After passing the course, the student should be able to:

- Explain purpose and aim for quality assurance procedures
- Administrate a quality management system
- Account for principles of implementation of new working methods
- Describe and apply the presented tools for improvement work, stable processes and
- standardised working methods
- Identify, describe, visualise and analyse a value stream
- Explain how quality assurance and Lean Production interact to reach customer satisfaction
- Describe the most common statistical functions
- Explain meaning of basic statistical concepts
- Carry out linear regression
- Explain the role of statistics in improvement work and management of activities
- Use computer tools for statistical analysis
- Calculate probabilities by means of the classical probability definition and probability distributions
- Calculate or estimate expected values and variance from collected data, and interpret the results.
- Assess when different probability distributions are appropriate to use in calculations

Course contents

- Principles of quality management and how they are related to Lean Production
- Tools for standardised working methods
- Methods for improvement work
- Description and use of a management system for quality
- The role of statistics in improvement work
- Basic mathematical statistics
- The statistics as a visualisation tool
- The role of the statistics for an understanding of business development
- Value stream analysis
- Visualisation
- Principles of Lean Production

Course literature

Meddelas 10 veckor innan kursstart

Examination

- TENL - Examination LEAN/Quality, 3.5 credits, grading scale: A, B, C, D, E, FX, F
- INL1 - Individual submissons, 1.0 credits, grading scale: P, F
- TENS - Written examination Statistics, 4.5 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.

Other requirements for final grade

INL1- Written assignment, 1.0 credits, grading scale: P, F

TENL- Examination, 3.5 credits, grading scale: A, B, C, D, E, FX, F

TENS- Examination, 4.5 credits, grading scale: A, B, C, D, E, FX, F

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.