

Quality and Business Development

Programme course

6 credits

Kvalitets- och verksamhetsutveckling

TMQU08

Valid from: 2017 Spring semester

Determined by

Board of Studies for Industrial
Engineering and Logistics

Date determined

2017-01-25

Main field of study

Industrial Engineering and Management

Course level

First cycle

Advancement level

G2X

Course offered for

- Air Transportation and Logistics
- Civic Logistics
- Communication and Transportation Engineering, M Sc in Engineering

Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites

Probability and Statistics

Intended learning outcomes

The course intends to meet industry's requirements for engineers with knowledge in the quality field. The course will provide a holistic view of the quality field with particular focus on principles, methodologies and techniques for quality management. After the completed course, the student shall be able to;

- collect, assess and analyse process information in order to systematically identify and solve quality related problems within industry and service.
- plan and conduct quality improvement projects concerning statistical quality control, design of experiments, product development and process development
- apply fundamental principles, methodologies and techniques for quality management and with a systems perspective identify situations where these can contribute to industrial development through improvement of products and processes
- critically assess and discuss forms for organising quality improvements and describe principles for how quality management can be implemented in industrial organisations
- evaluate and develop policies, goals and procedures for quality management and describe the structure of a quality management system

Course content

Strategies within TQM, Customer focus, Design of experiments, Robust design, Statistical process control, Capability, Process management, 7 improvement and 7 management tools, Quality Management Systems with focus on ISO 9001:2000, Lean production.

Teaching and working methods

In order to encourage active learning with our students, the course is organised around a number of project assignments connected to an industrial example. The teaching consists of lectures, where theoretical perspectives are presented; seminars for discussion of cases; tutorials where the students have the opportunity to apply central methods; and regular supervision to support the projects.

Examination

UPG2	Assignments	4 credits	U, G
MUN1	Oral examination	2 credits	U, 3, 4, 5

The results from the exam and the assignments will be weighed together to determine the final grade.

Grades

Four-grade scale, LiU, U, 3, 4, 5

Other information

Supplementary courses:

Six Sigma Quality, Statistical Quality Control, Lean production, Customer Focused Product and Service Development

Department

Institutionen för ekonomisk och industriell utveckling

Director of Studies or equivalent

Björn Oskarsson

Examiner

Peter Cronemyr

Education components

Preliminary scheduled hours: 52 h

Recommended self-study hours: 108 h

Course literature

Additional literature

Books

Ljungberg, Anders, Larsson, Everth, (2012) *Processbaserad verksamhetsutveckling : [varför - vad - hur?]*

ISBN: 9789144059761

Lund : Studentlitteratur, 2012

Compendia

Kurskompendium

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.