# Quality Management

## Programme course

6 credits

Kvalitetsledning

TMQU46

Valid from: 2017 Spring semester

**Determined by**
Board of Studies for Chemistry, Biology and Biotechnology

**Date determined**
2017-01-25

## Main field of study
Industrial Engineering and Management

## Course level
First cycle

## Advancement level
G2X

## Course offered for
- Chemical Analysis Engineering, B Sc in Engineering
- Chemistry
- Chemical Biology
- Engineering Biology, 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
At least two years studies at the Institute of Technology and knowledge within mathematical statistics.

# Intended learning outcomes

The course intends to meet the requirements of the biotechnical and chemical engineering industry on engineers with knowledge in the quality field. The course will provide a holistic view of the quality field with particular focus on principles, practices 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.
- plan and conduct quality improvement projects concerning statistical quality control, product development and process improvement.
- apply fundamental principles, practices and techniques for quality management, and use a systems perspective to identify situations where these can contribute to industrial development through improvement of products and processes.
- critically assess and discuss forms of organising for quality improvement and describe principles for how quality management can be implemented in industrial organisations, such as the biotechnical, chemical engineering and pharmaceutical industry.
- evaluate and develop policies, goals and procedures for quality management and describe the structure of a quality management system.

# Course content

Quality development, customer focus, mapping and improvement of processes, Statistical Process Control (SPC), quality and management tools, leadership for quality, strategic improvement work, and quality management systems.

# Teaching and working methods

The course is organised around a number of project assignments related to an industrial example. The teaching consists of lectures, where theoretical perspectives are presented; tutorials where the students have the opportunity to apply central methods; and supervision to support the project assignments.

# Examination

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|---|---|---|---|
| UPG1 | Assignments | 4 credits | U, 3, 4, 5 |
| DAT1 | Computer examination | 2 credits | U, 3, 4, 5 |

The results from the examination are weighed together to form the final grade.

# Grades

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

## Other information
Supplementary courses: Statistical Quality Control, Six Sigma Quality, Lean production, Customer Focused Product and Service Development

## Department
Institutionen för ekonomisk och industriell utveckling

## Director of Studies or equivalent
Björn Oskarsson

## Examiner
Martina Berglund

## Education components
Preliminary scheduled hours: 48 h
Recommended self-study hours: 112 h

# 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://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.