

Customer Focused Product and Service Development

Programme course

6 credits

Kundfokuserad produkt- och tjänsteutveckling

TMQU13

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

Second cycle

Advancement level

A1X

Course offered for

- Design and Product Development
- Industrial Engineering and Management - International, M Sc in Engineering
- Industrial Engineering and Management, M Sc in Engineering
- Mechanical Engineering, M Sc in Engineering
- Industrial Engineering and Management, Master's programme

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

Mathematical statistics, Quality Management and Engineering

Intended learning outcomes

This course provides in-depth knowledge and skills in methods and theoretical approaches to customer-centric products and services development. After the course the student should be able to:

- Demonstrate advanced knowledge of statistical as well as qualitative methods to collect, process and draw conclusions on customer requirements
- Apply an engineering systems perspective in the implementation of decision support for development processes and projects
- Understand how the handling of customer requirements can be integrated into industrial product and service development processes
- Apply different theoretical perspectives on the concept of innovation, and understand how users of services and products may contribute to innovation
- Use Quality Function Deployment to translate customer requirements into technical product characteristics and requirements on production processes
- Analyse the interaction between man, technology and organization in a product and service solution
- Evaluate the choice of method for involving the user, and make decisions according to findings
- Identify, utilize and critically analyse scientific literature in the field.
- Use the course methodologies in the implementation of a development project and communicate the results

Course content

Product development processes, Stage gate models, Quality function deployment, the Kano model, Service innovation, Service recovery, Voice of the customer, MTO, Critical Incident Technique, Switching path analysis

Teaching and working methods

The theoretical elements of the course are undertaken in the form of lectures and workshops. The course has a strong research connection and scientific papers represent a significant part of the literature. The course is based on the active participation and to provide course practical skills, knowledge is applied in three different projects carried out in groups and individually. In addition, guest lectures will illustrate industrial cases.

Examination

UPG1 Assignments and laboratory exercises 6 credits U, 3, 4, 5

The course is organized around lectures, seminars and workshops in which important issues are presented and discussed. The examination of the course is based on assignments (2 group assignments and 1 individual) and participation in a literature seminar.

Grades

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

Other information

Supplementary courses:

Six Sigma Quality, Quality and Process Development, Lean production

Department

Institutionen för ekonomisk och industriell utveckling

Director of Studies or equivalent

Björn Oskarsson

Examiner

Elisabeth Johansson

Education components

Preliminary scheduled hours: 34 h

Recommended self-study hours: 126 h

Course literature

Additional literature

Books

Gustafsson, Anders, Johnson, Michael D., (2003) *Competing in a service economy. [Elektronisk resurs] : how to create a competitive advantage through service development and innovation*

ISBN: 0787970670, 9780787970673

San Francisco, Calif. ; [Great Britain] : Jossey-Bass, c2003; University of Michigan Business School management series

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.