

Man, Technology and Organization

Programme course

4 credits

Människa, teknik, organisation

TMIU02

Valid from: 2017 Spring semester

Determined by

Board of Studies for Mechanical
Engineering and Design

Date determined

2017-01-25

Main field of study

Mechanical Engineering

Course level

First cycle

Advancement level

G1X

Course offered for

- Civil Engineering, B Sc in Engineering
- Computer Engineering, B Sc in Engineering
- Engineering Electronics

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.

Intended learning outcomes

After passing the course the student should have knowledge about the dynamics between people, technology and organizations from an engineering perspective. The student should be able to:

- describe different theoretical models concerning the dynamics between people, technology, organizations from an industrial perspective
- describe different theoretical models for physical environment and social and organisational aspects
- analyse a workplace from a human, technological and organisational perspective
- suggest methods for a workplace investigation

Course content

Socio-technology, systems theory, dynamic models
Planned change, Work environment and economy
Individual, group and organization from an industrial perspective
Labor market and laws and regulations
Competence and learning. Gender
Physical work environment factors; light/noise, physical workload, chemical hazards.
Perception and Cognition
Safety and risk
Quality from a systems perspective Qualitative and quantitative methods

Teaching and working methods

The course consists of lectures, lessons/supervision and extensive independent group work. The lessons deal with the theoretical areas. The lessons deal with applications of the theoretical areas, including measuring physical factors as well as supervision of the independent work. The independent group work consists of two parts and includes an analysis of workplace from a human, technological and organisational perspective. The work is presented orally and written in a report. Opposition of another group's work is included. The course is given in Linköping in vt2 and Norrköping ht1.

Examination

UPG2 Methods - Individual Paper	1 credits	U, 3, 4, 5
UPG1 Individual assignment with oral and written report	3 credits	U, 3, 4, 5

Grades

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

Department

Institutionen för ekonomisk och industriell utveckling

Director of Studies or equivalent

Jostein Langstrand

Examiner

Martina Berglund

Course website and other links

Education components

Preliminary scheduled hours: 32 h

Recommended self-study hours: 75 h

Course literature

Arbete och teknik på människans villkor, 2011, Prenter, Stockholm. Några modeller hämtas bl.a. ifrån: Porras, J. I. and Robertson, P. J., 1992.

Organizational Development: Theory, Practice, and Research. In Dunette, M. D. and Hough, L. M. Handbook of Industrial & Organizational Psychology, Second edition, Volum 3, Consulting Psychologists Press, Palo Alto. Svedberg, L., 2007. Grupp-psykologi, Om grupper, organisationer och ledarskap, Studentlitteratur. Artiklar

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.