

Transportation Systems

Programme course

6 credits

Transportsystem

TNK044

Valid from: 2017 Spring semester

Determined by
Board of Studies for Industrial
Engineering and Logistics

Date determined
2017-01-25

Main field of study

Transportation Systems Engineering

Course level

First cycle

Advancement level

G1X

Course offered for

- Communications, Transport and Infrastructure, 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.

Intended learning outcomes

The course aims is to provide an introduction to the entire educational program Communication Transportation and Infrastructure (CTI), by describing both the historical development and the present situation in the area and providing examples of working tasks for a Master of Science in CTI. Particular emphasis is put on aspects concerning societal development, ethics and gender. The course exposes a student to project based work and conveys literature search, technical writing and oral presentation in project form. Oral and written argumentation is covered in a separate exercise.

When finishing the course, the student will be capable to:

- give examples of working tasks for a Master of Science in CTI.
- search for acquire information about an issue within the CTI area and understand different approaches.
- discuss societal and ethical aspects of both the development of transportations systems and the engineering profession.
- orally and written present a topic within the CTI area in a group.
- argue orally and written for opposed positions in a current issue within the CTI area.

Course content

The course consists of several integrated items, compiled by a set of lectures, each of which is dedicated to a specific issue in the CTI area. Parallel to this a project assignment, concerning an issue within traffic, transportation and/or logistics, is accomplished in group. In addition to this, a minor argumentation task is carried out individually.

Teaching and working methods

The course is carried out through lectures, seminars and work in teams and individually. Several of the lectures are offered by invited representatives from the industry. The participation in all guest lectures is compulsory. During the course, a novel with relevance to the engineering trade is read and discussed during literature seminar. Additionally, lectures conveying oral and written communication skills will be given. Oral presentation and argumentation is examined at the seminars. The course is run the complete autumn semester.

Examination

UPG5 Individual assignments with oral and written presentation	1.5 credits	U, G
UPG7 Active participation at lectures and seminars	1.5 credits	U, G
UPG2 Individual assignments with oral and written presentation	1.5 credits	U, G
UPG6 Group project assignments with oral and written presentation	1.5 credits	U, G

Grades are given as 'Fail' or 'Pass'.

Grades

Two-grade scale, U, G

Other information

Supplementary courses:

Traffic Infrastructure Transport Economy/Transport Environment, Introduction to Logistics and Cost-Benefit Analysis

Department

Institutionen för teknik och naturvetenskap

Director of Studies or equivalent

Erik Bergfeldt

Examiner

Joakim Ekström

Education components

Preliminary scheduled hours: 51 h

Recommended self-study hours: 109 h

Course literature

Additional literature

Books

Brusman, Mats, Editor, Friberg, Tora, Editor, Summerton, Jane, Editor, Linköpings universitet, Filosofiska fakulteten, Originator, Linköpings universitet, Institutionen för studier av samhällsutveckling och kultur, Tema Kultur och samhälle, Originator, Linköpings universitet, Institutionen för tema, Tema teknik och social förändring, Originator, (2008) *Resande, planering, makt*

ISBN: 9179242154, 9789179242152

Pandoraserien; Lund: Arkiv förlag, 2008.

Guillou, Jan, (2011) *Brobyggarna*

ISBN: 9789164203199

Stockholm : Piratförlaget, 2011; Det stora århundradet; 1

Merkel, Magnus, Önnegren, Britta, Andersson, Ulrika, (2011) *Lathund för rapportskrivning. [Elektronisk resurs]*

Linköping, Linköpings universitet, 2011

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.