

# Applications of Discrete-Event Simulation

Programme course

6 credits

Tillämpningar av diskret simulering

TDDC28

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

Second cycle

## Advancement level

A1X

## Course offered for

- 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

Discrete-event simulation

## Intended learning outcomes

The main idea of the course is to deepen the knowledge in discrete-event simulation and to apply that knowledge to real-life situations by working in project groups on practical cases. After completed course students will be able to:

- Identify and formulate problems that can be solved using discrete-event simulation
- Independently carry out real-life simulation projects
- Document and present the results of a simulation project

## Course content

Students can choose to analyze a system in any of the application areas of discrete-event simulation, e.g. production or logistics. Lectures will cover common topics for all projects, such as problem structuring, data analysis, verification and validation of simulation models, experimentation, etc. Project groups will also be responsible for acquiring additional knowledge about the chosen application area.

## Teaching and working methods

The course mainly consists of project work in groups, as well as lectures and seminars where different aspects of simulation projects are presented and discussed.

## Examination

PRA1 Project work: Simulation model, report and presentation

6 credits U, 3, 4, 5

## Grades

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

## Department

Institutionen för teknik och naturvetenskap

## Director of Studies or equivalent

Erik Bergfeldt

## Examiner

Krisjanis Steins

## Course website and other links

<http://www2.itn.liu.se/utbildning/kurs/index.html?coursecode=TDDC28>

## Education components

Preliminary scheduled hours: 58 h

Recommended self-study hours: 102 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://stydokument.liu.se/Regelsamling/Innehall/Utbildning\\_pa\\_grund-\\_och\\_avancerad\\_niva](http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva).