

Basic Logistics Algorithms

Programme course

6 credits

Grundläggande logistikalgoritmer

TNSL20

Valid from:

Determined by
Board of Studies for Industrial
Engineering and Logistics

Date determined

Main field of study

Logistics

Course level

First cycle

Advancement level

G2X

Course offered for

- Air Transportation and Logistics, Bachelor's Programme
- Civic Logistics, Bachelor's Programme

Prerequisites

Basic algorithmic and/or programming concepts.

Intended learning outcomes

The course introduces the students to several models of basic logistics problems and algorithms for their solution. After the course students should be able to:

- Identify critical tasks in project planning
- Schedule maximum number of non-conflicting jobs
- Optimally allocate tasks to processing facilities
- Find stable distributions of goods
- Program MATLAB routines for basic logistic problems

Course content

- Assignment and matching
- Paths and flows in transportation networks
- Covering and packing
- Facility location
- MATLAB scripts and functions

Teaching and working methods

The course consists of lectures and seminars. The lectures give the theoretical background. During the seminars, assignments and problems are discussed.

Examination

UPG1	Hand-in assignments	3 credits	U, G
TEN1	Written examination	3 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

Valentin Polishchuk

Education components

Preliminary scheduled hours: 40 h

Recommended self-study hours: 120 h

Course literature

Fastställs senare.