

**SYLLABUS**

# **Industrial Logistics, Advanced Course 7.5 credits T7001N**

**Industriell logistik, fördjupningskurs**

**Course syllabus admitted: Autumn 2023 Sp 1 - Present**

**DECISION DATE  
2023-02-15**

# Industrial Logistics, Advanced Course 7.5 credits T7001N

## Industriell logistik, fördjupningskurs

### Second cycle, T7001N

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Industriell logistik	Industrial Engineering and Management

## Entry requirements

Completed courses of at least 120 credits, with at least the grade Pass. This must include the following courses: Logistics 1 (T0002N) 7,5 credits, Logistics 2 (T7004N) 7,5 credits and Operations management (T0008N) 7,5 credits, or equivalent knowledge. Good knowledge in English, equivalent to English 6.

## Selection

The selection is based on 30-285 credits

## Course Aim

This course provides an integrated, holistic approach to decision-making processes in logistics and includes both qualitative and rigorous mathematical treatment. It provides a comprehensive, model-based treatment of logistics processes and examines in depth every important part of the logistics system. Its purpose is to provide students with valuable insight and resources to be able to practically conduct but also to be able to improve the logistics operations. The students will after the course have the ability to seek, and find, the research front and to study the relevance of the theory and the problem formulations to practical situations in companies and organizations. - Finding sources of knowledge, perform source criticism and draw their own relevant conclusions. - Practice their communication, writing and presentation skills. (This course is a preparation for higher positions in planning, production, purchasing, decision-making in supply chain management.)

## Contents

Modeling Languages and optimization solvers, Languages for Data Analysis, Algorithm and Problem Complexity, Advanced methods for demand forecasting, Location models and methods in logistics systems, Criteria for supplier selection, Design and management of facilities and warehouses, Advanced planning and management of freight transportation, Linking theory and practice, Special cases and themes in logistics (sustainable logistics, food logistics, disaster logistics, health care logistics, etc.), in decision-making and planning processes (multi-criteria optimization, goal programming, bi-level optimization, game theory, data envelopment analysis, big data analytics, and in computer tools (GIS, ERP, CRM, Point of Sale suits, etc.)

## Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

Lectures, advanced assignments, group work and compulsory seminars, and possibly guest lectures. The course includes business-related projects.

## Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. Oral and written presentation of the project work, and compulsory attendancy at seminar.

## Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term “unauthorized aids” refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

## Remarks

Students must register for the courses themselves, or contact ETKS educational administration [eduetks@ltu.se](mailto:eduetks@ltu.se), not later than three days after the quarter commences. Failure to do so can result in the place being lost. This rule also applies to students with a guaranteed place.

## Overlap

The course T7001N is equal to IET066

The course T7001N corresponds to course IET066.

## Course offered by

Department of Social Sciences, Technology and Arts

## Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0002	Required assignment	G U 3 4 5	3	Mandatory	A07	
0003	Take-home examination	G U 3 4 5	4.5	Mandatory	A08	

## Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

## Last revised

by Director of Undergraduate Studies Daniel Örtqvist, Department of Business Administration, Technology and Social Sciences 2023-02-15

## Syllabus established

The syllabus was established on February 28, 2007 and is valid from the autumn term 2007.