

## Tárgytematika / Course Description

### Logistics

AJNM\_LSTA024

**Tárgyfelelős neve /**

**Teacher's name:** dr. Földesi Péter

**Félév / Semester:** 2022/23/1

**Beszámolási forma /**

**Assesment:** Vizsga

**Tárgy heti óraszám /**

**Teaching hours(week):** 2/2/0

**Tárgy féléves óraszám /**

**Teaching hours(sem.):** 0/0/0

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### OKTATÁS CÉLJA / AIM OF THE COURSE

The aim of the subject is to discuss the general definitions, trade-offs and trends of logistics and supply chain management. The students will be familiar with the theories and best practices of warehousing, manufacturing and transportation. They will be motivated to work on practice oriented problems as part of the seminars.

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### TANTÁRGY TARTALMA / DESCRIPTION

Introduction, definitions (logistics, supply chain management), concept of logistics (6Rs, trade-offs) strategic issues (push-pull systems, facility location),

Operation management (“production logistics”), production scheduling (MPS), the role of inventory, bill of materials, cost of inventory

MRP I., MRP II. , JIT, decoupling point, bottle-neck problems, OPT

Purchasing, distribution, recycling, the closed loop of logistics

Warehousing technologies, equipment, layout design, order picking

Material handling machinery, fork lifts, cranes, conveyors, vehicles

Transportation system elements, transportation network, features of road, rail, air, water haulage, freight forwarding

Vehicles, trucks, wagons, vessels, containers

Design of distribution systems, connection to marketing, single and multi channel distribution, centralized and decentralized solutions, cross docks

Optimizing tools, forecasting, ABC and XYZ analysis, , simulations, computer software

Classical operation research tools: assignment problem, bin packing problem, travelling salesman problem , simplex method, queuing theory

Special logistics systems: maintenance, pipe lines (water, gas, oil), energy supply, medical systems

Measurement of logistics performance, key performance indicators, cost analysis

Summary

EXAM

Oral examination 50% (Prof. Péter Földesi)

Mid-term assignments 50 % (supervised by Mr. Tamás Bódis)

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### **SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD**

EXAM

Oral examination 50% (Prof. Péter Földesi)

Mid-term assignments 50 % (supervised by Mr. Tamás Bódis)

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### **KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL**

Literature: electric documents