

<b>University:</b> University of Zilina	
<b>Faculty:</b> Faculty of Mechanical Engineering	
<b>Subject code:</b> 2Y035	<b>Subject name:</b> Purchasing and Distribution Logistics (PDL_E)
<b>Profile subject:</b> yes	
<b>Type, scope and method of educational activities:</b>	
Weekly number of teaching hours in the form of lectures, exercises, seminars, clinical practice.	2 - 0 - 2 (lectures-exercises-laboratory exercises) hours
The method by which the educational activity is carried out	Teaching is carried out on a full-time basis.
Methods of achieving educational results	<p><b>Lectures:</b> systematic theoretical problem interpretation of the issue, problem-oriented teaching, interactive lecture with multimedia support, consultations in connection with feedback</p> <p><b>Exercises:</b> model examples, motivational demonstration, explanation, problem-based teaching, continuous examination</p>
<b>Number of credits:</b> 4.0	
<b>Student workload:</b> <i>The total time intensity of the course is 156 hours per semester, of which 52 hours per semester is direct teaching and 104 hours per semester is independent study and independent creative activity of the student.</i>	
<b>Recommended semester / trimester study:</b> summer semester	
<b>Degree of study:</b> 2	
<b>Prerequisites:</b>	
<b>Conditions for passing the subject:</b>	
Exercises: semester exercises - total assessment = 0 - 40 points,	
<b>Final rating:</b>	
Exam: - max. 60 points.	
<b>The resulting classification of the subject:</b>	
Rating A: 93 - 100 points	
Rating B: 85 - 92 points	
Rating C: 77 - 84 points	
Rating D: 69 - 76 points	
Rating E: 61 - 68 points	
FX rating: less than 61 points.	

### Learning Outcome Scoreboard:

Forms and methods of evaluation	Scale	Area of knowledge, skills, competences
Semester assignments in exercises	40%	Professional knowledge, presentation skills, teamwork, working with information, independent work, practical skills.
Exam	60%	Professional knowledge

### Learning outcomes:

By completing the course, the student will acquire:

- can interpret knowledge from the field of supply logistics, inventory management and distribution in the context of solving a complex business and supply chain
- can apply methods and tools for the selection and evaluation of suppliers
- can determine the amount of material needs depending on its origin (dependent/independent need)
- can apply push and pull inventory management systems in the company,
- can calculate the basic parameters of the optimal replenishment mode (batch size, order cycle, number of orders, maximum level, signal level, etc.) using deterministic and stochastic inventory models
- can critically assess the basic factors affecting the required amount of insurance reserves and subsequently apply an appropriate approach for determining its amount
- can apply methods and tools for inventory analysis and reduction in the context of the three-stage model of corporate inventory analysis
- knows how to design the optimal structure of the distribution system in the context of acquisition and physical distribution requirements
- knows how to design non-company transport systems in the context of the choice of the type and method of transport, the technologies used in transport, the choice of technical means and the possibilities of securing them through logistics service providers
- can apply methods for solving transport route planning problems (deterministic/stochastic problems)
- can analyze, propose and optimize warehouse management solutions.

### Course contents:

#### Lectures

1. Basic goals, functions and tasks of purchasing in the company, logistics activities.
2. Selection and evaluation of suppliers.
3. Supply process management.
4. Determining the amount of material needs.
5. Systems for inventory management.
6. Optimization models.
7. Determining the amount of insurance reserves.
8. Analysis and reduction of stocks in the company.
9. Distribution and distribution logistics – goals, functions.
10. Building a distribution network.
11. Transport and distribution.
12. Storage in supply and distribution logistics

13. New trends in supply and distribution logistics.

**Exercises**

Students solve case studies and samples.

**Recommended reading:**

KRAJČOVIČ, M., RAKYTA, M., DULINA, L., GRZNÁR, P., GAŠO, M. 2018. Zásobovacia a distribučná logistika. 1. vyd. Žilina : Žilinská univerzita, 2018. 492 s. [26,18AH]. ISBN 978-80-554-1490-4

KRAJČOVIČ, M. 2014. Zásobovacia a distribučná logistika : návody na cvičenia. 1. vyd. Žilina : Žilinská univerzita, 2014. 112 s., ISBN 978-80-554-0922-1

LAMBERT, D.M – STOCK, J.R. – ELLRAM, L.M. 2005. Logistika. Vyd. 2. Brno : CP Books, 2005, 589 s. ISBN 80-251-0504-0.

EMMET, S. 2008. Řízení zásob. Praha : Computer Press, 2008. ISBN 978-80-251-1828-3

Leenders, M.R.: Purchasing and Materials Management. Irwin, Boston 1989

Dilworth, J.B.: Operations Management. McGraw-Hill, New York, 1992

**A language whose knowledge is required to complete the course:** english

**Notes:**

**Course evaluation**

Total number of evaluated students: 0

A	B	C	D	E	FX
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

**Person securing the subject (subject guarantor):**

Ing. Vladimíra Biňasová, PhD., DiS.

**Teaching:**

Name and surname of the teacher, titles	Organizational form provided by the university teacher (Lectures, exercises, laboratory work, field exercises)
Ing. Vladimíra Biňasová, PhD., DiS.	Lectures
Ing. Vladimíra Biňasová, PhD., DiS.	Exercises

**Date of last change:** 15.12.2022

**Approved:** prof. Ing. Martin Krajčovič, PhD.