



RTU Course "Information Technologies in Logistics"

12111 Modelēšanas un imitācijas katedra

General data

Code	DMI706
Course title	Information Technologies in Logistics
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Post-graduate Studies
Course type	Academic
Field of study	Computer Science
Responsible instructor	Andrejs Romānovs
Volume of the course: parts and credits points	1 part, 4.0 Credit Points, 6.0 ECTS credits
Language of instruction	LV, EN, RU
Possibility of distance learning	Not planned
Abstract	This course "Information technologies in logistics" is an essential component of logistics specialist theoretical training that enables students to effectively work in the area of business logistics, based on the use of modern information technology. In this course, the basics of logistics information technologies are taught; a special attention is paid to the basic functioning principles of logistics information systems and to the information technologies used in logistics, such as GPS, GIS, barcodes, RFID, wireless, mobile, networking and EDI. There are also examined examples of IT applications in the purchasing, manufacturing, distribution, transportation, inventory and warehouse logistics.
Goals and objectives of the course in terms of competences and skills	To provide basic knowledge in the field of information technology and systems, which are designed for solving topical logistics problems. To acquire practical skills of using information and communication technology in logistics. To form students' competences in the acquisition of general conception of logistics and related information technologies, software and hardware, to encourage scientific and practical interest in the current trends in logistics information technologies.
Structure and tasks of independent studies	Students' independent work includes these activities: preparation of the theoretical background for laboratory works, summarising and analysing the results as well as analytical work with recommended literature and other information sources related to the individual research on information technologies in logistics.
Recommended literature	<ul style="list-style-type: none"> • Kenneth C. Laudon and Jane P. Laudon. Management Information Systems: Managing the Digital Firm. 10th ed., Pearson Prentice Hall, 2006. • Martin Murray. Understanding the SAP Logistics Information System. Galileo Press, 2007. • Ronald H. Ballou. Business Logistics/ Supply Chain Management. 5th ed., Pearson Prentice Hall, 2004. • Sunil Chopra, Peter Meindl. Supply Chain Management: Strategy, Planning & Operation. 3rd ed., Pearson Prentice Hall, 2007. • Tilanus, B. Information Systems in Logistics and Transportation. 2nd ed., Pergamon, 1997.
Course prerequisites	Basic knowledge in Informatics

Course outline

Theme	Hours
The role of information technologies in LSCM.	2
Basics of enterprises' information systems	4
Major subsystems and internal operation of logistic information systems	4
Basic information technologies in logistics	8
IT applications to support logistics functions	8
Intermediate checks (tests, individual research, discussions etc.)	6
Laboratory studies in the field of logistics information technologies and systems	32

Learning outcomes and assessment

Learning outcomes	Assessment methods
Are able to consider, interpret and use professional terminology in logistics and related information technologies area.	Successfully passed test.
Are able to discuss about the information technologies and systems in logistics, to analyze problems and trends of the industry.	While conducting discussions and seminars, based on the theoretical knowledge the ability to constructively discuss the problem under consideration using professional terminology, is demonstrated
Are able to solve thematic tasks in the field of logistics IT and to compare results of different solution scenarios and their performance.	While doing laboratory works, the ability to perform assigned tasks, carrying out different tasks scenarios and comparative analysis of its results, has been demonstrated.

Are able to describe the relevance of the chosen logistics information technology topics, to classify existing solutions and analyze the existing problems and trends.	While doing individual research work the ability to justify the choice of themes, to carry out current situation analysis, as well as to explain the problems and trends of given thematic areas, has been demonstrated.
Are able to explain the essence, possibilities and importance of the use of information technologies and systems in logistics	When passing the examination, the ability to understand the essence of the thematic task, as well the ability to provide a laconic and well-reasoned clarification of assigned themes is shown.

Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work
1.	4.0	6.0	2.0	0.0	2.0		*	