

**FACULTY OF SOCIETY AND SCIENCE  
STUDY COURSE DESCRIPTION**

<b>Course Title:</b>	<b>MODERN LOGISTIC SYSTEMS</b>				
<b>Course code (LAIS):</b>	<b>TraZ5001</b>				
<b>Study programme:</b>	<b>Business Environment Administration</b>				
<b>Level of Study programme:</b>	<input type="checkbox"/>	1st level professional higher education			
	<input type="checkbox"/>	Professional Bachelor			
	<input checked="" type="checkbox"/>	Professional Master			
	<input type="checkbox"/>	Academic Master			
	<input type="checkbox"/>	PhD level			
<b>Type of Study programme:</b>	<input checked="" type="checkbox"/>	Compulsory course (Part A)			
	<input type="checkbox"/>	Professional specialization courses (Part B, compulsory)			
	<input type="checkbox"/>	Professional specialization optional courses (Part B, optional)			
	<input type="checkbox"/>	Elective courses (Part C)			
<b>Course Workload:</b>	<b>Credits</b>	<b>ECTS</b>	<b>Academic hours</b>	<b>Contact hours</b>	<b>Independent work hours</b>
<b>Course Author/ Tutor:</b>	<b>Karlis Krumins</b>				
	Guest lecturer, Professional Master's degree in Sociotechnical Systems modelling				
	<u>e-mail</u> :karlis.krumins@va.lv				
	Consultation: according to the schedule for each semester				
<b>Study Form:</b>	Full time studies				
<b>Study year, semester:</b>	1 <sup>st</sup> year, 1 <sup>st</sup> semester				
<b>Language:</b>	English				
<b>Prerequisites for the Course:</b>	-				
<b>Course Summary:</b>	Students will gain knowledge and understanding of modern logistics management, logistics information systems, sources of data and optimization approaches. Students will improve process analysis skills through modelling and analysis of a logistics system.				
<b>Assessment:</b>	Examination				
<b>Requirements for Credits:</b>	1. Individual test of knowledge 15%, passing grade 50% 2. Participation in seminars 15% 3. Individual assignments 70%				
<b>Abiding by the Academic Ethics</b>	<p>Students must abide by the academic and research ethics, Vidzeme University of Applied Sciences Ethics Regulations, incl.:</p> <ul style="list-style-type: none"> <li>– study papers must be independently developed;</li> <li>– the study work should reference all statements, ideas and data used that have been authored by someone else;</li> <li>– appropriate data acquisition methods should be used in the acquisition of data, the research ethics must be respected, empirical data must be collected independently and cannot be distorted or falsified;</li> <li>– the examination must be carried out by the student independently, without the use of supporting materials and/or consultations with other students, unless the lecturer states otherwise.</li> </ul> <p>In the event of non-compliance with the academic and research ethics, punishment is imposed in accordance with the ViA Ethics Regulations and the study course must be re-taken, unless the punishment is extramarital.</p>				
<b>Learning Outcomes; the evaluation methods and criteria</b>	<b>Learning Outcomes</b>			<b>The evaluation methods and criteria</b>	
	<b>Knowledge</b>				
	Logistics systems fundamentals			Tests, practical assignments	
	Technology in logistics			Tests, practical assignments	
	<b>Skills</b>				
	Designing requirements for logistic systems			Practical assignments	
Costs-benefits analysis of changes in existing			Practical assignments		

	logistic practices	
	Using simulation for process analysis	Practical assignments, independent work
	<b>Competency</b>	
	Assessing existing logistics practices	Tests, practical assignments, seminars
	Designing requirements for a logistic management system	Seminars, practical assignments, independent work
	Analysing and improving an existing logistic system using simulation	Seminars, practical assignments, independent work
<b>Course Compulsory literature:</b>	Simulation with Arena, Kelton W., Sadowski R., Zupick N. (McGraw Hill) AnyLogic 7 in Three Days, Grigoryev I. (Anylogic) Logistics and Supply Chain Management, Martin Christopher (Prentice Hall) Strategic Supply Chain Management, Cohen S., Roussel J. (McGraw Hill)	
<b>Course additional literature:</b>	Hugos M., Essentials of Supply Chain Management (Wiley) Schönsleben P. Integral Logistics Management (CRC Press) Lean Six Sigma Logistics, Thomas G., Martichenko R. (J. Ross Publishing)	
<b>Course confirmation date:</b>	05.09.2018.	
<b>Date of course description update:</b>	31.08.2018.	

### Study Course Plan:

Date	Theme	Academic hours		Study Form/ Organization of independent work of students and task description
		Contact hours	Independent work hours	
<i>The date is specified before the implementation of the course</i>	Logistics and logistics information systems. Historical systems still in relevant use. Applications, requirements and cost-effectiveness. Future trends. Technology in logistics. Data acquisition (including GPS, QR codes and RFID), transmission (including wireless) and processing. Industrial networks and automation.	8	20	Lectures, practical assignments, independent work
	Technology in logistics. Data acquisition (including GPS, QR codes and RFID), transmission (including wireless) and processing. Industrial networks and automation. Simulation of logistics systems. Continuous and discrete-event systems. Analysis and optimization of logistics systems. Limitations of analysis techniques.	8	20	Lectures, seminars, practical assignments, independent work
	Simulation of logistics systems. Continuous and discrete-event systems. Analysis and optimization of logistics systems. Limitations of analysis techniques.	8	16	Lectures, seminars, practical assignments, independent work, exam
<b>Hours total:</b>		<b>24</b>	<b>56</b>	