RĪGAS TEHNISKĀ
UNIVERSITĀTE

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# Study programme "Logistics and Supply Chain Management"

## Main attributes

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| Title | Logistics and Supply Chain Management |
| Identification code | DML0 |
| Education classification code | 45482 |
| Level and type | Academic Master (Second Cycle) Studies |
| Higher education study field | Information Technology, Computer Engineering, Electronics, Telecommunications, Computer Control and Computer Science |
| Head of the study field | Agris Ņikitenko |
| Deputy head of the study field | Jurģis Poriņš |
| Department responsible | Faculty Of Computer Science Information Tehnology And Energy |
| Head of the study programme | Andrejs Romānovs |
| Professional classification code | |
| The type of study programme | Full time |
| Language | English |
| Accreditation | 29.11.2023 - 30.11.2029; Accreditation certificate No 2023/44-A |
| Volume (credit points) | 80.0 |
| Duration of studies (years) | Full time studies - 2,0 |
| Degree or/and qualification to be obtained | Master degree of engineering science in logistics and supply chain management / – |
| Qualification level to be obtained | The 7th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF) |
| Programme prerequisites | Bachelor degree of engineering science or natural sciences or social sciences (economics, management), or professional bachelor degree in the mentioned fields of science, or comparable education |

## Description

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| Abstract | The study programme focuses on topical problems of logistics systems and supply chain management, in particular, on appropriate information technology based solutions and their implementation, and contribute to the education of highly qualified professionals who have the knowledge and skills to operate in an international environment. Study programme has a strong focus on students' competencies development in logistics information technology solutions, simulation and modelling methods and tools, which develops the technical approach to solving logistics systems and supply chain problems. The study programme offers the latest developments in the industry at a high international level, as it joins three universities from different European countries, which provide expertise in different specializations, namely "Logistics information systems" (Riga Technical University, Latvia), "Transport Logistics" (UAB Autonomous University of Barcelona, Spain) and "Logistics Systems Engineering and Implementation" (UASW Technical University of Applied Sciences Wildau, Germany). Students and academic staff mobility promotes knowledge and experience exchange among partner universities. |
| Aim | To educate professionals able to understand and implement logistics systems technology, as well as identify, analyse and solve problems in logistics systems and supply chains, related to their design, implementation, operation and management, including logistics information technology and systems, and to develop students' ability to carry out scientific work, participate in local and international projects and continue doctoral studies. |
| Tasks | •Tasks of study programme:<br>- to develop students' systems thinking ability and their skills needed in the area of logistics systems and supply chain management;<br>- to use fundamental and classical solutions along with recent scientific achievements, including information technology, providing effective solutions of various problems in logistics systems and supply chains;<br>- to provide students with knowledge and experience from different scientific areas by cooperating with staff from different European universities;<br>- to provide staff and students mobility within the partner universities;<br>- to ensure the flexibility of the study programme and possibility to modify it in order to follow changes in the labour market and new developments in technologies;<br>- to encourage students to participate in scientific research;<br>- to prepare and motivate students for further doctoral studies. |

| Learning outcomes | The graduate of the study programme: |
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| | - is able to solve problems of logistics systems and supply chains by taking into account general management concepts, human resources, environmental issues as well as technological and economic aspects; |
| | - is able to identify problems in the area of logistics systems and supply chains and evaluate their complexity: |
| | - is able to select and apply suitable methodologies and technologies to solve problems in the field of logistics systems and supply chains; |
| | - is able to evaluate different alternatives and select the solution to be implemented in the field of logistics systems and supply chains; |
| | - is able to elaborate solid arguments to convince and motivate decision makers, select the proper supply chain partners and then plan and coordinate the project to implement the solution; |
| | - is able to develop solutions to specific problems, by using modern information technology in the field of logistics systems and supply chains; |
| | - is able to choose the best transportation solution for the problem in the field of logistics systems and supply chains; |
| | - is able to use modern engineering and technology solutions for specific problems in the field of logistics systems and supply chains; |
| | - is able to acquire new knowledge and skills independently; |
| | - is able to justify advantages or disadvantages of a particular problem solution to the customer or other specialist; |
| | - is able to follow the rules of ethics within the scope of one's authority; |
| | - is able to participate in local and international scientific projects as well as lead them; |
| | - is able to study at postgraduate level. |
| Final/state examination procedure, assessment | The final examination consists of the defence of a Master Thesis and a test in fundamental and special areas of knowledge. Master Thesis is defended in front of a special examination commission meeting, with the opportunity for the representatives from partner universities to participate in the work of the commission (either in person or teleconference mode). The learning outcomes in Master Thesis are evaluated according to 10 grade system. |
| Description of the future employment | Graduates can work as a logistics systems implementation consultants and supply chain managers, logistics information systems managers, logistics and information technology project managers, logistics application software specialists, logistics systems and supply chain modelling specialists, purchasing or transportation managers, information technology department managers for logistics company. Graduates are also prepared for continuing work in industrial research and development as well as in scientific research and higher education. |
| Special enrollment requirements | English competency requirements: TOEFL (Test of English as a Foreign Language) computer-based version – min 250 points, paper-based version - min 630 points; IELTS (International English Language Testing System) - min 6.5 points, „Cambridge Proficiency Certificate of English" - level C or higher, or successful assessment of English in previous diploma supplement, except in the case if previous education is obtained in English. |
| Opportunity to continue studies | Doctoral studies. |

*Courses*

| No | Code | Name | Credit points |
|----|------|------|---------------|
| A | | **Compulsory Study Courses** | **36.0** |
| 1 | DMI705 | Basics of Logistics and Supply Chain Management | 4.0 |
| 2 | DMI714 | Modelling and Simulation in Logistics | 4.0 |
| 3 | DMI715 | Optimization Methods in Logistics | 2.0 |
| 4 | DMI706 | Information Technologies in Logistics | 4.0 |
| 5 | DMI762 | Material Handling Technologies and Automated Solutions | 4.0 |
| 6 | DMI704 | Supply Chain Network Management Technologies | 4.0 |
| 7 | IĀS706 | Global Markets and Supply Chains | 2.0 |
| 8 | DMI712 | LSCM European Dimension | 2.0 |
| 9 | DSP737 | Systems Thinking | 4.0 |
| 10 | DOP711 | Project Management | 2.0 |
| 11 | IKI761 | Quality and Environmental Management | 2.0 |
| 12 | IVZ732 | Human Resources | 2.0 |
| B | | **Compulsory Elective Study Courses** | **22.0** |
| B1 | | **Field-Specific Study Courses** | **18.0** |
| | | *Logistics Information Systems* | *18.0* |
| 1 | DMI708 | Logistics Information Systems | 6.0 |
| 2 | DMI707 | Electronic Commerce in Logistics | 3.0 |
| 3 | DSP738 | Systems Analysis | 2.0 |
| 4 | DMI716 | Decision Synthesis Principles and Practice in Logistics | 9.0 |
| | | *Logistics Systems Engineering and Implementation* | *18.0* |
| 1 | DMI722 | Material Handling System Design and Analysis | 6.0 |
| 2 | DMI723 | Transport System Design and Analysis | 6.0 |
| 3 | DMI720 | Logistics Management and Control System Specification and Evaluation | 7.0 |
| 4 | DMI721 | Logistics System Implementation and Ramp-up | 7.0 |
| B2 | | **Humanities and Social Sciences Study Courses** | **4.0** |
| 1 | IĀS435 | Organization and Management of International Economic Relations | 2.0 |
| 2 | IĀS701 | International Business | 2.0 |
| 3 | MAB700 | Industrial Engineering | 2.0 |
| 4 | DOP712 | Information Technology Fundamentals | 2.0 |
| C | | **Free Elective Study Courses** | **2.0** |
| E | | **Final Examination** | **20.0** |
| 1 | DMI726 | Master Thesis | 20.0 |