International Programme

List of English taught courses offered to the Erasmus+ programme and international exchange students

Logistics Technologies

Master degree level

Summer 2026

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Logistics Technologies

Course code	Course title	Number of ECTS credits
AB_GLE	German Language I	5
AN_BSP	Security and Reliability of Logistics Processes	4
AN_TCL	Technology of City Logistics	5
AN_SAM	System Analysis and Modeling	7
AN_SBR	South Bohemian Region	5
AN_SAS	Warehousing and Storage	5

German Language I (Code: AB_GLE) | Number of credits: 5

Course objectives

The aim of the course is to provide the students with the basic competencies necessary for normal communication in the language studied. The course aims to gradually achieve the specified output level A1 according to the Common European Framework of Reference in the range of specified thematic areas (lessons 1 - 4). After completing the course, the student has knowledge at the A1 level and masters the basic grammatical structures and vocabulary necessary for communication in a foreign language. At the end of the course, the student masters the principles of pronunciation of the German language and has knowledge of German language at the A1 level according to SERR for languages: masters the basic vocabulary necessary for understanding in basic communication, knows the basic grammatical structures necessary to compose a simple sentence, masters basic phrases and phrases - greetings, introductions, basic information.

Topics

1. Principles of German pronunciation

2. Introduction

3. Everyday life

4. Asking for information. Questions

5. In a town 6. At a party

7. Transport, means of transport 8. Prepositions I, Prepositions II

9. Imperative 10. In a hotel

11. Travelling 12. Family, social life.

Security and Reliability of Logistics Processes (Code: AN_BSP) | Number of credits: 4

Course Objectives

The student will gain expertise in the field of security and reliability of logistics chains, with an emphasis on the risks of material and information flows. The graduate is able to define and assess the security and reliability of logistics chains and to assess the importance of human factor for the reliability and security of logistics chains. It controls the theoretical fundamentals of security and crisis management in the context of security and reliability of logistics chains and can analyze information on crisis situations and the possibilities of dealing with these situations. After completing the course, the student can analyze individual elements that could disrupt the security and reliability of logistic processes. It is able to determine the impacts of the risks that affect the processes.

Topics

1. Introduction to safety and reliability, definition of quality, reliability and safety.

2. Quality, ISO and standards. 3. Tools to improve quality.

4. Quality documentation and ISO 9001

5. Operational reliability of machines and equipment.

6. Faults of machines and equipment

7. Technology of maintenance and repair of machines.

8. Increasing the reliability of systems.

9. Technical diagnostics 10. Probabilistic and static reliability indicators.

11. Security management. 12. Security of information systems. 13. Crisis management.

Technology of City Logistics (Code: AN_TCL) | Number of credits: 5

Course objectives

The aim of the course is to acquaint students with the nature and solution of logistics problems of cities in different concepts of partial solutions to complex approach. They become familiar with the classic concept of city logistics solutions as flows of goods and other materials to the centers of large cities, widespread concept involving all relevant components of transport in the whole agglomeration, the issue of freight and public transport, including its integration as an important part of city logistics and related logistics and environmental aspect. Graduates will be able to identify strengths and weaknesses in transport in towns and cities, can solve the task scheduling and optimization of transport and traffic flows in cities. They will be able to define and describe the properties of both passenger and freight transport, environment and transport technology, able to define the basic parameters of a comprehensive solution of this particular issue.

Topics

1. The issues of City Logistics. 2. Road transport of the world cities.

3. Transport as a system. 4. System approach to urban transport.

5. Definition of transport services.

6. Modeling the operation in the transport sector.

7. Forecasting and modeling the transport needs.

8. Creating the transport process using the PTV VISION.

9. Logistics of supplying the city by freight transport.

10. Technology of operating the city by freight transport.

11. Data collection and analysis of permeability.

12. Analysis and modeling the population movements.

13. Analysis of connectivity and appropriateness of cartography methods.

System Analysis and Modeling (Code: AN_SAM) | Number of credits: 7

Course objectives

The aim of the course is to acquaint students with the issues of more advanced optimization methods, game theory and models of mass service and methods that are applicable in logistics. The graduate of the course demonstrates advanced knowledge in these areas. Can solve practical tasks and logistical problems related to these methods. he graduate of the course demonstrates advanced knowledge in these areas. Can solve practical tasks and logistical problems related to these methods.

Topics

1. Game theory (basic concepts, pure strategies) 2. Single matrix games (mixed strategies, graphic method) 3. Single matrix games (mixed strategies, simplex method) 4. Two-matrix games, a system with non-transferable winnings 5. Two-matrix games, system with portable winnings 6. Oligopoly model 7. Theory of collective service (models of collective service) 8. Theory of collective service (optimization in models of collective service) 9. Inventory theory 10. Structural analysis (principle and model s.a.) 11. Structural analysis (distribution and value equations) 12. DEA (CCR, BCC) 13. DEA (efficiency evaluation)

Forms of Teaching

Lecture, Seminar, Professional Practice, Tutorial, Consultation, Teaching Block – seminar.

South Bohemian Region (Code: AN_SBR) | Number of credits: 5

Course objectives

The objective of the course is to get knowledge of the South Bohemian region - its assets, cultural history, tourism, current problems and opportunities. Emphasis is placed on understanding the region's destinations and products of tourism as well as its role within European Bioeconomy.

Topics

1. Cultural history of the South Bohemian region and its impact on present.
2. Natural assets, geography of South Bohemia region and its impact.
3. Economic development of the South Bohemian region.
4. Infrastructure of the South Bohemian region and its functioning.
5. Tourism in the South Bohemian region.
6. Destinations and products of tourism of the South Bohemian region.
7. Cultural and natural heritage of the South Bohemian region.
8. Current problems influencing South Bohemian region.
9. The role of South Bohemian region within European Bioeconomy.
10. SMART South Bohemian region?
11. Comparison of South Bohemian region to other EU regions.
12. Student presentations on selected topics. 13. Student presentations on selected topics.

Warehousing and Storage (Code: AN_SAS) | Number of credits: 5

Course objectives

The aim of the course is to acquaint students with the issues of warehouses and warehouse logistics. The course is focused on the functions and position of warehouses in logistics chains. Students will get acquainted with individual types of warehouses, warehouse equipment, as well as technologies that are used in warehouses. The graduate of the course will be able to design basic requirements for warehouses, design and calculate individual parameters of the warehouse (minimum required area of the warehouse, minimum required number of handling equipment in the warehouse). The graduate of the course will also be able to design a suitable type of packaging and means of transport (will gain practical skills in creating handling units), will be familiar with the issue of automatic identification in warehouses (working with barcodes, working with reading devices, working with RFID tags). The graduate will get acquainted with the basic tasks and activities in the warehouse information system.

Topics

1. Introduction to storage

2. Handling technology in warehouses - cyclically working handling means

3. Handling technology in warehouses - periodically and continuously working means of handling

4. Packaging and packaging technology

5. Packaging tests and packaging marking

6. Means of transport in warehouses

7. Warehouses and storage

8. Storage equipment

9. Storage systems 10. System design of warehouse management

11. Automatic identification - bar code technology

12. Automatic identification - radio frequency technology 13. Logistics technologies in warehouses.