

BASIC COURSE INFORMATION WITHIN THE STUDY PROGRAMME

PROFESSIONAL GRADUATE STUDY
PROGRAMME

**LOGISTICS
MANAGEMENT**

Course title: E-Logistics

Course Code:

LM212

Semester:
2

Lectures + Exercises + Seminar:
2 + 1 + 0

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To acquire knowledge and skills necessary for the application of advanced information and telecommunication technologies in supply chain management. To gain an understanding of Internet-supported logistics and electronic business.

Course Content:

Internet services and e-business. Definition of e-logistics and its application in supply chain management. ICT systems and technologies, infrastructure in different modes of transport and transport chains. Innovative technologies and automation of logistics processes in e-commerce, transportation, and warehousing. Supply chain in the context of hyperconnectivity, the Internet of Things (IoT), and cloud computing. Development perspectives of e-logistics. Electronic transactions and legal regulations. Security and reliability of e-business.

General and Specific Competences (Knowledge and Skills):

- General: Assessment of the strategic importance of e-logistics for managing and improving logistics processes within the supply chain.
- Specific: Application of Internet-supported technology in logistics management.

Learning Outcomes:

After successful completion of the course, students will be able to:

1. Critically assess and present possibilities for applying Internet-supported technological and software solutions in logistics process management to improve operations and create competitive advantages.
2. Analyze the advantages and disadvantages of information and telecommunication solutions in the supply chain.
3. Evaluate the need for implementing advanced information and telecommunication technologies in the execution of supply chain logistics processes.
4. Design optimization elements of logistics systems by introducing e-logistics models.
5. Evaluate security, legal, and environmental aspects of Internet-supported technologies.

Required literature:

1. Rogić, K., Stanković, R., Šafran, M. Upravljanje logističkim sustavima. Veleučilište Velika Gorica, Velika Gorica, 2012.
2. Šafran, M. Teaching Materials, Veleučilište Velika Gorica.

Course title: Company Economics

Course Code:
LM101

Semester:	Lectures + Exercises + Seminar:	Total Hours:	ECTS Credits:
1	2 + 1 + 1	60	6

Course Objectives:

To familiarize students with the fundamental concepts of business economics and to develop an economic way of thinking and reasoning, with a particular emphasis on activities within the logistics system.

Course Content:

Introduction: The concept of business economics as a scientific discipline; methods and techniques; economic theory and analysis; production and cost functions; framework conditions for the development of microeconomic entities; technological progress and economic development and their impact on the position of economic entities.

Theory of the Firm and Entrepreneurship: Theory, goals, and values of the firm; the concept of entrepreneurship and the entrepreneur; business actors and their relationships; principles of business operations; functions and assets of the enterprise; business performance indicators.

Organization of the Enterprise: Concept and theory of organization; organizational structure.

Business Operations: Business principles and policy; planning; financing; assets of the enterprise; market operations; performance control; risk management.

Cost Theory: Definition and significance of costs; nature and types of costs; main cost characteristics – fixed and variable costs; cost centers and cost carriers; cost responsiveness and remanence; cost dynamics; marginal, total, and average costs; cost separation methods.

Cost Calculation: Concept and elements of cost calculation; types of calculation – divisional, supplementary, and combined; costs, revenues, and capacity utilization; application of cost theory in pricing policy under various market conditions; calculations in production and trade sectors.

Business Results: Expenses; revenues; business results (profit and loss); financial statement analysis; enterprise value assessment; performance measurement – productivity, efficiency, profitability; corporate-level business policy; decision-making in market uncertainty; corporate governance.

Business Economics: Economics of resources (labor, materials, and fixed assets); economics of work processes; functional economics.

Investment Economics: Preparation, evaluation, and implementation of investment projects.

General and Specific Competences (Knowledge and Skills):

- General: Acquiring fundamental theoretical and practical knowledge of business economics necessary for operational enterprise management and for identifying strategic development potentials.
- Specific: Understanding methods of measuring relative and financial performance, tools for planning business success, and applicable knowledge for cost management and decision-making.

Learning Outcomes:

After successful completion of the course, students will be able to:

1. Define the enterprise as a system.
2. Analyze and evaluate enterprise operations in the market.
3. Explain and conceptually define various types of costs, cost centers, and cost carriers.
4. Identify, formulate, and solve practical problems related to cost management, pricing policy, and different market situations.
5. Argue research approaches in logistics business performance, results, and possible limitations.
6. Propose and predict success indicators and performance measures of an enterprise.
7. Compare business, resource, process, and functional economics.
8. Prepare and present documentation for an investment project.

Required literature:

1. Karić, M. (2009). *Ekonomika poduzeća*. 2nd ed. Osijek: Faculty of Economics in Osijek.
2. Mačečević, D. (2012). *Ekonomika poduzeća*. Internal Study Materials. Velika Gorica: University of Applied Sciences Velika Gorica.

Course title: Finances in Logistics

Course Code:

LM411

Semester:
4

Lectures + Exercises + Seminar:
2 + 1 + 1

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To provide students with knowledge related to the fundamental conceptual framework of business finance, as well as to develop understanding of models, procedures, techniques, and methods for implementing financial management across various operational areas of a logistics enterprise.

Course Content:

Fundamental issues of financing. Definition and objectives of financing. Financial management. Forms of business organization and business objectives. Financial system in the economy. Financial markets. Accounting principles, standards, and policies. Taxes – basic concepts and tax policy. Optimization of financing sources. Financial forecasting and planning. Budget planning; budgeting in public systems (e.g., military budget). Short-term and long-term financing. Financial planning in crisis situations. Financial statements. Capital investment. Working capital management. Leverage and capital structure. Controlling and cost management. Payment systems. Instruments of payment security. International financial management.

General and Specific Competences (Knowledge and Skills):

- General: Acquiring knowledge and skills necessary for making sound financial decisions regarding short-term and long-term investments, managing liquidity and solvency, and ensuring optimal investment decisions to achieve effective financial management in the logistics system and maximize business performance.
- Specific: Understanding economic value and the fundamentals of financial reasoning. Gaining knowledge of business finance, risk measurement, cost of capital, valuation processes, value management, and the financial efficiency of investment projects. Understanding cash flow dynamics in business processes, the interdependence between asset management and financing, as well as the principles of debt usage, capital structure, and dividend policy.

Learning Outcomes:

After completing the course, students will be able to:

1. Define the concept, objectives, and principles of financing.
2. Describe and interpret fundamental financial statements.
3. Independently prepare pro forma financial statements.
4. Properly define and distinguish short-term and long-term financing.
5. Analyze financial performance indicators with the aim of optimizing a logistics model.
6. Develop a simplified example of a capital investment.
7. Describe and analyze financial risks and methods of financial risk protection.
8. Effectively manage working capital within a logistics company.

Required literature:

1. Vidučić, Lj., Pepur, S., & Šimić Šarić, M. (2018). Financijski menadžment. 10th ed. Zagreb: RRiF Plus.
2. Mačečević, D. (2022). Upravljanje financijama u logistici. Internal study materials. Zagreb.

Course title: Information Systems in Logistics

Course Code:
LM102

Semester:
1

Lectures + Exercises + Seminar:
2 + 1 + 1

Total Hours:
60

ECTS Credits:
6

Course Objectives:

To provide students with knowledge of the application of modern information and communication technologies (ICT) in supporting logistics systems and supply chains. To enable the adoption and application of methods for designing information systems (IS), modeling business processes, and analyzing business data derived from existing (real-world) logistics systems.

Course Content:

Introduction to information systems (IS). The relationship between organizational and information systems. Concepts of information systems: data, information, information management, information system, business process, process model, and data model. Fundamental business processes in logistics systems.

Information, material, human, and order flows in logistics systems. Architecture of information systems in business and social organizations. Information system development life cycle. Core entities of logistics systems. Process modeling (information representation of operations) in logistics systems. Data modeling derived from process models. Development of a conceptual data model for a logistics IS. Translating the conceptual data model into a relational data model. Logical organization of databases for logistics information systems. Data retrieval algorithms for obtaining information from relational databases. Organizational possibilities for establishing and implementing information systems in logistics. Information system resources and their organizational alignment. Data protection and business continuity with implemented IS solutions.

General and Specific Competences (Knowledge and Skills):

- General: Understanding the basic interactions between organizational and information systems and their coordinated development.
- Specific: Application of methods and procedures for modeling and designing IS for logistics processes and systems. Representation of process models and design of logical databases for logistics IS.

Learning Outcomes:

After completing the course, students will be able to:

1. Explain the stages in the development of modern information systems.
2. Conduct an analysis of business processes within a logistics system.
3. Design business process diagrams using the Data Flow Diagram (DFD) method.
4. Create a conceptual (ER) data model for logistics IS.
5. Translate a conceptual (ER) data model into a relational data model.
6. Explain the procedure for obtaining required information from a relational data model.

Required literature:

1. Pavlič, M. (2011). Informacijski sustavi. Zagreb: Školska knjiga.
2. Radošević, I. (2020). Projektiranje poslovnih informacijskih sustava. Zagreb: VERN University.
3. Pavlič, M. (2011). Oblikovanje baza podataka. Rijeka: Department of Informatics, University of Rijeka.

Course title: Integrated Logistics

Course Code:
LM103

Semester:	Lectures + Exercises + Seminar:	Total Hours:	ECTS Credits:
1	2 + 1 + 1	60	6

Course Objectives:

To acquire fundamental knowledge of logistics systems and a systematic approach to logistics.

Course Content:

Concepts, historical development, importance, types, and purposes of logistics. Business logistics, competitive advantage through logistics support, logistics chains, and the significance of logistics for business operations. Quality of logistics support (effectiveness and efficiency of systems).

Logistics support costs throughout the life cycle of organizations, services, and products. Logistics management (logistics planning, logistics strategies, logistics products). Service logistics (products and services, capacity, waiting and distribution channels, order processing, and information flows).

Integrated logistics within the organization – relationships with other departments, forecasting of logistics requirements, stages of development of integrated logistics, and achievements by stages.

Inventory management (classification of items, economic order quantity, safety stock).

Material management within an enterprise (scheduling models, warehouse systems and processes, storage locations, warehouse components and operations, internal transport and material flow, packaging).

Transport and transport management (types and characteristics of transport, transport regulation, intermodal transport, selection of transport mode and carriers, own and leased transport).

Maintenance systems as a logistics subsystem – relationship between concept, technology, and maintenance organization; quality and optimization of maintenance systems.

General and Specific Competences (Knowledge and Skills):

- General: Mastery of knowledge related to the organization of logistics in business systems.
- Specific: Understanding logistics systems, logistics chains, and logistics technologies, as well as the ability to forecast logistics requirements.

Learning Outcomes:

Upon successful completion of the course, the student will be able to:

1. Distinguish the components of logistics and assess their impact on a business system.
2. Identify elements of efficiency and calculate their values in simple cases.
3. Analyze and predict types of logistics costs within the life cycle cost structure.
4. Differentiate and compare types of logistics management and propose improvements within the organization.
5. Critically assess and design optimization approaches for service logistics (capacity, waiting times, and distribution channels).
6. Evaluate the interconnection between integrated logistics and other company sectors and propose improvements in logistics coordination.
7. Identify inventory management problems, classify items, and calculate economic order quantities.
8. Develop proposals for improving material flow management within a company.

Required literature:

1. Bloomberg, D. J., LeMay, S., & Hanna, J. B. (2007). Logistika. Zagreb: Mate.
2. Barković, M. (2022/2023). Lecture Presentations for the Course. Velika Gorica: VVG (posted on Gaudeamus VVG).
3. Barković, M. (2019). Efektivnost ili učinkovitost uređaja (Effectiveness or Efficiency of Equipment). Velika Gorica: VVG (posted on Gaudeamus VVG).
4. Barković, M. (2019). Troškovi životnog ciklusa (Life Cycle Costs). Velika Gorica: VVG (posted on Gaudeamus VVG).

Course title: Logistics for Special Purposes

Course Code:
LM213

Semester:
2

Lectures + Exercises + Seminar:
2 + 1 + 0

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To acquire knowledge in the field of leadership, management, organization, and coordination of military logistics processes.

Course Content:

Basic concepts, role, and purpose of military logistics; specific features of logistics branches.

History of military logistics: overview of key military and wartime events and modern trends.

Types of military logistics: procurement of weapons and military equipment, technical supply and maintenance, provisioning, medical, veterinary, transport, construction, financial, and fire protection logistics; operational and coordination functions.

Staff work in military organizations – logistics departments and their management and command functions.

Fundamental principles of military logistics.

Systems of planning, programming, and budgeting, as well as budget implementation and the role and importance of logistics.

Logistics in military operations, logistics management in crisis conditions, decision-making, and control.

Operational logistics management: force deployment, symbology, logistics working maps, and practical examples.

NATO logistics: NATO logistics principles and logistics policy.

Planning of joint and specific military logistics strategies.

Planning of military equipment and armament.

Standards and standard operating procedures (SOPs) in multinational operations.

Planning of logistics in military and peacekeeping allied operations.

Characteristics of logistics systems in different countries and integration into NATO logistics systems.

Logistics reporting and personnel planning for military logistics.

General and Specific Competences (Knowledge and Skills):

- General: Mastery of knowledge in military logistics and its application; understanding methods for applying logistics principles in national and international military operations.
- Specific: Planning, organization, coordination, and management of military logistics processes.

Learning Outcomes:

Upon successful completion of the course, the student will be able to:

1. Critically compare functional areas and components of coordination and operational military logistics in national and multinational contexts.
2. Demonstrate how modern trends and developments in the military field affect specific functions and capacities of military logistics.
3. Analyze the structure and tasks of all staff departments, with an emphasis on the logistics staff department.
4. Distinguish between the contents and timelines of defense planning, programming, and budgeting.

5. Design schematic representations of logistics support functions in a tactical-level military operation.
6. Analyze the principles and differences in the planning and functioning of military logistics at national and multinational levels.

Required Reading:

1. Barković, M., Škoti, B., & Spudić, R. (2015). Vojna logistika. Velika Gorica: University of Applied Sciences Velika Gorica.
2. Barković, M., Škoti, B., & Spudić, R. (2025). Authorized Lecture Notes for the Course Special Purpose Logistics (Military Logistics). Velika Gorica: University of Applied Sciences Velika Gorica.

Course title: Logistic Processes Optimization

Course Code:
LM202

Semester:
2

Lectures + Exercises + Seminar:
2 + 1 + 1

Total Hours:
60

ECTS Credits:
7

Course Objectives:

To acquire fundamental and advanced knowledge of mathematical modeling and optimization of logistic processes.

To develop practical skills in solving logistic problems using software tools.

Course Content:

Structure of logistic processes (activities, resources, organization). Optimization issues and fundamentals of logistic system modeling. Linear programming. Resource allocation problems. Transportation and distribution problems, location problems. Integer programming. Mixed-integer programming. Simulation of logistic processes. Parametric programming and sensitivity analysis of models. Software tools for modeling and optimization.

General and Specific Competences (Knowledge and Skills):

- General: Understanding the functioning of supply chain logistic processes and acquiring knowledge and skills in modeling and optimization methods.
- Specific: Independently describe basic logistic problems in logical and mathematical form and apply suitable mathematical models and methods to solve them.

Learning Outcomes:

Upon successful completion of the course, the student will be able to:

1. Analyze the performance of logistic processes using key performance indicators (KPIs).
2. Design optimization models for logistic problems.
3. Develop simulation models of logistic systems and processes.
4. Apply mathematical methods and simulation software tools to optimize logistic systems and processes.
5. Design elements of optimization within logistic systems and processes.
6. Evaluate and interpret optimization results.

Required Reading:

1. Rogić, K., Stanković, R., & Šafran, M. (2012). Upravljanje logističkim sustavima. Velika Gorica: University of Applied Sciences Velika Gorica.
2. Pašagić, H. (2003). Matematičke metode u prometu. Zagreb: Faculty of Transport and Traffic Sciences.

Course title: Entrepreneurship

Course Code:
LM401

Semester:
4

Lectures + Exercises + Seminar:
2 + 1 + 0

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To acquire professional knowledge in the field of entrepreneurship and to develop a positive attitude toward entrepreneurial behavior at both organizational and societal levels.

Course Content:

Sources of entrepreneurial ideas: business processes, global changes, idea creation.
Developing and encouraging creativity; creating a creative climate.
Entrepreneurial opportunities: opportunity evaluation, sources of opportunities, evaluation criteria, and opportunity testing.
Entrepreneurial business model. Relationship between business models and innovation.
Corporate entrepreneurship. Corporate social responsibility (CSR).
Assessment of industry attractiveness (Porter's Five Forces model).
Generic competitive strategies and competitive advantage.
Entrepreneurial project or social responsibility project.

General and Specific Competences (Knowledge and Skills):

- General: Teamwork, creativity, and analytical reasoning.
- Specific: Project planning and management, business system analysis, presentation, and justification of proposed solutions.

Learning Outcomes:

Upon successful completion of the course, the student will be able to:

1. Analyze the attractiveness of a specific economic activity.
2. Assess opportunities and make decisions under uncertainty and risk.
3. Propose a competitive strategy within the analyzed industry.
4. Develop a business model for an entrepreneurial idea or a social responsibility project.
5. Present an entrepreneurial or socially responsible project.

Required Reading:

1. Kuvačić, N. (2010). Biznis – plan ili poduzetnički projekt: počela poduzetništva & poduzetnički projekt (teorijski prikaz & radna bilježnica). Split: Beretin.
2. Morris, M. H., Kuratko, D. F., & Covin, J. G. (2011). Corporate Entrepreneurship & Innovation. South-Western College Publishing.

Course title: Business Communication

Course Code:

LM311

Semester:
3

Lectures + Exercises + Seminar:
2 + 1 + 0

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To acquire knowledge and skills in business communication, presentation, and negotiation, as well as in establishing and maintaining business relationships with logistics service clients and partners.

Course Content:

Definition of the communication process. Fundamental principles and types of communication. Characteristics of verbal and non-verbal communication. Communication skills. Presentation techniques. Negotiation and mediation. Types and characteristics of business communication. Business etiquette.

General and Specific Competences (Knowledge and Skills):

- General: Understanding the communication process.
- Specific: Effective application of communication skills in business contexts.

Learning Outcomes:

Upon successful completion of the course, the student will be able to:

1. Critically evaluate the communication process.
2. Independently articulate and justify fundamental communication principles.
3. Compare communication types and analyze the factors of verbal and non-verbal communication within the communication process.
4. Select and apply basic negotiation techniques and evaluate their effectiveness.
5. Present viewpoints, solutions, and projects using appropriate principles and rules of business communication.
6. Self-assess and apply business etiquette in interactions with clients and colleagues.

Required Reading:

1. Fox, R. (2006). Poslovna komunikacija. Hrvatska sveučilišna naklada / Pučko otvoreno učilište, Zagreb.
2. Novosel Leinert, S. (2012). Komunikacijski kompas. Plejada, Zagreb.
3. Gnjato, V. (2003). Sastanci – interesno komuniciranje. Alinea, Zagreb.

Course title: Business English

Course Code:
LM211

Semester:
2

Lectures + Exercises + Seminar:
2 + 1 + 0

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To acquire professional terminology and improve business communication in English through the development of relevant vocabulary and grammatical structures. To enhance language skills—reading, listening, speaking, and writing—in professional and logistics-related contexts.

Course Content:

Grammar and Language: Study of grammatical structures including tenses, the passive voice, modal verbs, and comparison. Development of linguistic skills such as word formation, collocations, expressing opinions, and making suggestions.

Language for Specific Purposes: Mastering technical and professional terminology and abbreviations. Oral presentation of thematic units and development of communication competence. Use of visual aids in presentations.

Topics: Logistics services, job descriptions, 3PL, supply chain management, inventory management, logistics operations, transport, green logistics, description of physical characteristics and dimensions.

General and Specific Competences (Knowledge and Skills):

Knowledge of professional and technical terminology and its application in written and spoken English.

Skills in reading comprehension and professional communication in English within the field of logistics.

Learning Outcomes:

Upon successful completion of the course, the student will be able to:

1. Distinguish and analyze English grammatical structures and apply them in real-life situations.
2. Appropriately use technical terminology and professional expressions in relevant contexts.
3. Apply oral communication skills related to logistics topics and articulate opinions effectively.
4. Independently use professional literature in English.
5. Present critical reflections on the relationship between sustainable development and logistics, as well as environmentally friendly technologies and issues.
6. Design and deliver a professional presentation on a selected topic, demonstrating effective communication of professional content.

Required Reading:

1. Grussendorf, M. (2009). English for Logistics. Oxford University Press, Oxford.

Course title: Applied Statistics

Course Code:
LM104

Semester:	Lectures + Exercises + Seminar:	Total Hours:	ECTS Credits:
1	2 + 1 + 0	45	5

Course Objectives:

To acquire basic statistical concepts and methods, and to develop practical skills for applying statistical techniques in logistics.

Course Content:

Introduction: Population, random sample, and random event.

Probability Models: Random events and probability.

Variables: Concept and classification; discrete variables; binomial variable; continuous variables; normal variable. Two categorical variables – joint, marginal, and conditional distributions. Two quantitative variables – linear model, correlation, and regression.

Random Sample: Point estimates and plug-in models.

Inferential Statistics: Interval estimation of expected value; hypothesis testing for the expected value; distribution testing; testing independence between two variables; testing differences between means of two quantitative variables; linear model – model testing and interval prediction estimation.

General and Specific Competences (Knowledge and Skills):

Ability to understand and apply fundamental statistical concepts and methods.

Learning Outcomes:

Upon successful completion of the course, the student will be able to:

1. Select and analyze discrete and continuous random variables in mathematical problem modeling.
2. Conduct and evaluate interval estimation of expectations and probabilities.
3. Formulate appropriate hypotheses, perform tests, and evaluate the results of statistical tests on differences in means and probabilities of independent samples.
4. Formulate appropriate hypotheses, perform tests, and evaluate results of statistical tests on differences in means for paired samples.

Required Reading:

1. Čulina, B., Čulina, D. (2010). Elementarna vjerojatnost i statistika uz pomoć Excela. Veleučilište Velika Gorica.
2. Čulina, B. Uvod u statistiku kroz razumijevanje pojmova i formula i uz pomoć Excela. Teaching material, VVG.

Course title: Industrial and organizational psychology

Course Code:
LM312

Semester:
3

Lectures + Exercises + Seminar:
2 + 1 + 0

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To acquire knowledge and skills in the field of work psychophysiology applicable to modern work practices. Students will become familiar with procedures of professional orientation and selection, personnel training, basics of human resource management, job analysis methods, and the individual, environmental, and organizational factors that contribute to work efficiency.

Course Content:

Introduction: Definition of work psychophysiology and organizational psychology (scope, historical development, and relation to other disciplines).

Work environment and behavior; human-machine interaction.

Job analysis and classification. Cognitive abilities and personality traits in relation to work behavior.

Employee selection and job placement.

Training and development – identifying training needs.

Motivation: Theoretical models of motivation.

Evaluation and monitoring of employee performance – measuring job performance and productivity-related behaviors.

Stress, fatigue, and shift work.

Physical environment – noise, lighting, temperature.

Management, supervision, and leadership – definitions and theories of leadership.

Attitudes toward organization and work; job satisfaction, organizational commitment, and decision-making.

Organizational climate and culture.

Communication within and between teams. Cohesiveness, norms, and team goals.

Teamwork – characteristics of successful teams.

Human error – types and theories of errors.

Workplace hazards – prevention measures and procedures for accidents and work-related injuries.

General and Specific Competences (Knowledge and Skills):

General: Understanding the fundamentals of work psychophysiology and the impact of individual characteristics on productivity and work quality. Knowledge of methods for monitoring employee performance.

Specific: Ability to participate in employee recruitment and selection processes. Understanding of procedures for preventing workplace accidents and other adverse work-related outcomes.

Learning Outcomes:

Upon successful completion of the course, the student will be able to:

1. Critically analyze key concepts in work psychophysiology and their application in modern organizations.
2. Integrate knowledge of personality traits, cognitive abilities, and motivational theories to improve employee performance and well-being.

3. Conduct job analysis independently, identify risks, and propose measures for improving safety and ergonomic conditions.
4. Participate in planning and implementing employee selection procedures based on psychological principles and interdisciplinary cooperation.
5. Plan training and professional development programs according to organizational needs.
6. Critically evaluate organizational climate and culture and propose interventions to improve teamwork, communication, and organizational effectiveness.

Required literature:

1. Miljković, D., Rijavec, M. (2005). Organizacijska psihologija – Odabrana poglavlja. IEP/D2.
2. Petz, B. (1987). Psihologija rada. Školska knjiga, Zagreb.
3. Kroemer, K.H.E., Grandjean, E. (1999). Fitting the Task to the Human – A Textbook of Occupational Ergonomics. Naklada Slap, Jastrebarsko.

Course title: Logistic System Security

Course Code:
LM412

Semester:
4

Lectures + Exercises + Seminar:
2 + 1 + 0

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To acquire fundamental knowledge for establishing security in logistics systems and to adopt security standards applied within integrated logistics systems.

Course Content:

Potential hazards and risks in logistics processes. Threats to military logistics. Risks affecting employees, logistics companies, and clients. Threats to business data. Risk assessment and protection planning.

Protective measures and procedures; establishing and managing a security system. Insurance, technical and physical protection. Data protection and cybersecurity.

Risks and threats in transport and storage of goods, as well as in passenger transport. Interaction between logistics processes and the natural environment.

Natural and technological disasters. Hazardous materials in transport according to relevant international conventions for each transport mode.

Safety signs and warnings. Legal framework for safety and protection in the Republic of Croatia and the European Union.

Transport safety conventions, national laws, regulations, and decrees concerning safety in the Croatian transport system.

Importance of safety mechanisms in logistics processes.

Essence and significance of logistics security as a competitive advantage. Logistics security as an integral component of the overall security system.

Security concepts in logistics processes; logistics security from the perspective of legal regulations.

Fire safety, occupational safety, environmental and ecological protection. Impact of ergonomic solutions on logistics safety.

Safety mechanisms in internal transport.

Safety measures in warehousing, loading/unloading, and traffic routes.

Security mechanisms in logistics documentation – internal control and audit of transport, storage, contractual, and other business documentation; inspection and supervision.

Logistics security and insurance; responsibility and supervision over implementation of safety mechanisms in logistics processes.

General and Specific Competences (Knowledge and Skills):

General: Ability to assess vulnerability and threats within logistics processes.

Specific: Planning and implementation of security measures.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Evaluate the logistics system's security framework, its components, and environment.
2. Critically assess risks and safety issues in goods transport, warehousing, and passenger transport across all transport modes.
3. Analyze the environmental impact of logistics systems and propose protection measures.

4. Identify and assess security threats to logistics systems and propose adequate protection strategies.
5. Analyze and explain key concepts of crisis management.
6. Organize, monitor, and supervise the safety systems of logistics organizations and processes.
7. Apply acquired knowledge to propose and evaluate safety measures in logistics systems and processes.

Required literature:

1. Perić, T., Ivaković, Č. (1997). Zaštita i sigurnost u prometu. Fakultet prometnih znanosti, Zagreb.
2. Dobranović, Ž., Mihaljević, B. (2008). Privatna zaštita u normi i praksi. Veleučilište Velika Gorica, Velika Gorica.

Course title: Strategic Management in Logistics

Course Code:
LM313

Semester:
3

Lectures + Exercises + Seminar:
2 + 1 + 0

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To acquire fundamental knowledge of management and strategic management in logistics, and to develop managerial skills necessary for application in business operations, particularly in the logistics sector.

Course Content:

Management:

Definition of management – concept, tasks, and significance; functions and skills of management.
Development of management – early ideas, mature period, contemporary approaches.
Modern challenges in management – responsibility, information technology, globalization, and related trends.

Management functions:

- Planning: objectives, strategic and operational planning.
- Organizing: organizational structures, work processes and projects, delegation, authority, and power.
- Leading: coordination, teamwork, and situational leadership.
- Project management.
- Controlling: classical control, quality management, and decision-making models.
- Change management: creating a climate for change, managing the change process.

Strategic Management:

Definition and significance of strategic management; elements and models of strategic management.

Vision, mission, goals, stakeholders, and corporate social responsibility.

Strategy formulation – internal and external analysis (SWOT analysis), types and selection of strategies.

Strategy implementation – designing organizational structures, integration and control systems; alignment of strategy, structure, and control; programs, budgets, and procedures for implementation.

Politics and power in organizations – sources, influence on strategy, and management of organizational politics.

Conflicts in organizations – sources and strategic conflict management.

Organizational change – identifying the need for change, barriers and resistance, introducing change, and learning organizations.

Strategic management models; strategic approach to developing a logistics plan.

General and Specific Competences (Knowledge and Skills):

General: Understanding of management fundamentals with an emphasis on strategic management.

Specific: Ability to lead and participate in decision-making processes related to strategic issues in logistics.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Design a business activity plan, establish objectives, and evaluate multiple implementation alternatives.
2. Assess the suitability of various organizational structures, delegation of authority, and use of power.
3. Evaluate management leadership styles and relate them to specific organizational situations.
4. Argue and design appropriate control systems for logistics processes.
5. Propose a project-oriented approach to comprehensive business decision-making.
6. Assess the current state and future functionality of a logistics system.
7. Independently analyze external and internal business environments and align them with organizational vision, mission, and goals.
8. Formulate an appropriate business strategy and evaluate the conditions for its implementation.

Required literature:

1. Certo, C. S., & Certo, T. S. (2008). Moderni menadžment. 10th ed. Zagreb: MATE.
2. Thompson, A. A. Jr., Strickland, A. J. III, & Gamble, J. E. (2008). Strateški menadžment. 14th ed. Zagreb: MATE.

Course title: Quality Management in Logistics

Course Code:
LM204

Semester:
2

Lectures + Exercises + Seminar:
2 + 1 + 0

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To acquire knowledge of quality principles, methods, techniques, procedures, and tools applied in the systems of quality control and assurance within logistics operations.

Course Content:

Definition and concept of quality and quality management.

History and evolution of quality.

Fundamentals and principles of quality management.

Quality and business performance – stakeholders, roles, customers, costs and revenues, competitiveness.

Management tools for quality improvement and their practical application.

Standardization, accreditation, and metrology.

Quality management methods.

Quality management systems according to ISO 9001.

Integrated management systems (ISO 14001, 27001, 45001, 26000).

Business excellence models.

Design and development of quality management systems.

Quality evaluation – internal and external assessment.

Quality and business performance in the European Union and at the international level.

Technical legislation and compliance.

Education and training in quality management.

Quality management in logistics systems – similarities and differences among systems.

Change management, time management, and knowledge management in the context of quality improvement.

General and Specific Competences (Knowledge and Skills):

By mastering the course content, students acquire knowledge and skills necessary for establishing, maintaining, and continuously improving quality assurance systems.

They will understand the principles and methods of implementing and maintaining management systems, as well as techniques, procedures, and tools for quality control of products and services.

They will be capable of independently evaluating management systems.

Specific Competences:

Integration of quality and logistics systems into a unified management system.

Application of international standards in logistics operations.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Independently use literature and information sources in the field of management systems and undertake activities for continuous improvement of product and service quality through the integration of quality and logistics systems.
2. Apply methods, techniques, procedures, and tools for improving product and service quality.
3. Evaluate management systems, interpret analytical results, and identify nonconformities.
4. Apply international quality management standards within logistics operations.

5. Select appropriate methods, techniques, and tools to organize and develop an organizational quality management system.

Required literature:

1. Kacian Ivetić, I. (2018). Osiguravanje i kontrola kvalitete. Zagreb: Iproz d.o.o.

Course title: Human Potentials Management

Course Code:
LM203

Semester:
2

Lectures + Exercises + Seminar:
2 + 1 + 1

Total Hours:
60

ECTS Credits:
6

Course Objectives:

To acquire knowledge in the field of human resource management.

To understand the processes of personnel development, selection, and recruitment within logistics.

To gain knowledge of educational models related to logistics and workforce development.

Course Content:

The importance of human resource management.

Strategic human resource management.

Human resource planning.

Job analysis.

Recruitment, selection, onboarding, and allocation of personnel.

Performance monitoring and evaluation.

Employee motivation and reward systems.

Employee training and professional development.

Creating a positive organizational climate and culture.

Social and health protection.

Labor relations and employee services.

Incentive aspects of financial and non-financial rewards.

General and Specific Competences (Knowledge and Skills):

Ability to apply knowledge and skills in managing human resources effectively within an organization.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Anticipate organizational human resource needs.
2. Plan and implement recruitment processes.
3. Apply methods and techniques of professional selection.
4. Develop employee motivation and reward plans.
5. Apply criteria for performance evaluation.
6. Link the importance of human resource management to achieving organizational competitiveness.

Required literature:

1. Dessler, G. (2015). Upravljanje ljudskim potencijalima. Zagreb: Naklada Mate.
2. Sikavica, P., Bahtijarević-Šiber, F., & Pološki-Vokić, N. (2008). Temelji managementa. Zagreb: Školska knjiga.

Course title: Logistic System Management

Course Code:
LM105

Semester:
1

Lectures + Exercises + Seminar:
2 + 1 + 1

Total Hours:
60

ECTS Credits:
7

Course Objectives:

To acquire knowledge and skills for managing logistics systems and processes.

Course Content:

Theoretical foundations of systems management – cybernetics.
Structure and principles of functioning of logistic systems.
Application of decision-making theory and multi-criteria decision-making methods.
Elements of the supply chain system.
Basic management functions (planning, organizing, coordination, control).
Models and methods for planning logistic processes.
Project management methods.
Forecasting models and methods.
Information and communication systems in the logistics industry.
Risk management in the supply chain.
Support systems.

General and Specific Competences (Knowledge and Skills):

General: Understanding the functioning of supply chains and mastering the knowledge and skills necessary for managing logistics systems and processes.
Specific: Independently planning resources and activities within logistics processes, as well as managing the improvement and development of logistics systems.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Analyze the organizational structure of a logistics company.
2. Evaluate the performance of logistic systems and processes based on key performance indicators.
3. Design proposals for improving logistics systems and processes according to established optimality criteria.
4. Apply mathematical methods and software tools to solve problems in managing logistics systems and processes.
5. Plan resources and activities within logistics systems and processes.
6. Select an appropriate management model for logistic processes.

Required literature:

1. Rogić, K., Stanković, R., & Šafran, M. (2012). Upravljanje logističkim sustavima. Velika Gorica: Veleučilište Velika Gorica.
2. Ivaković, Č., Stanković, R., & Šafran, M. (2010). Špedicija i logistički procesi. Zagreb: Fakultet prometnih znanosti.

Course title: Procurement Management

Course Code:
LM201

Semester:
2

Lectures + Exercises + Seminar:
2 + 1 + 1

Total Hours:
60

ECTS Credits:
7

Course Objectives:

To familiarize students with the concepts of procurement and supply, as well as the fundamental principles necessary for successful procurement and supply management. To introduce management and procurement models, methods for controlling procurement and supply costs, as well as benchmarking and procurement controlling.

Course Content:

Concept, objectives, significance, and development of procurement:

Business process management; definition, objectives, significance, and development of procurement; concepts of procurement, supply, materials management, and logistics.

Procurement policy and strategy:

Fundamentals of inventory policy and consumption rate; policies on quantity and quality; procurement pricing policy; sourcing policy; procurement controlling; supplier relations policy; procurement contract policy; procurement strategies: local and global sourcing, specific procurement; single sourcing and multiple sourcing; outsourcing and insourcing supplier relationship strategies.

Operational procurement planning:

Needs assessment; inventory planning; procurement models; planning procurement methods; procurement systems.

Procurement organization:

Organization of the procurement function: designing the organizational structure and procurement processes, centralization and decentralization of procurement; the role of procurement within the organizational structure; centralized and decentralized procurement and supply; internal organization of procurement.

Operational procurement management:

Elements of the procurement process; supplier selection; types and conclusion of procurement contracts; deadline control and payments; electronic procurement; ethics in procurement; data protection and business control in procurement.

Strategic procurement management:

Procurement market research; needs assessment and planning; ABC and XYZ analyses in procurement (Management by Exception); coding and classification systems in procurement; RFID technology; value analysis; procurement and supply costs; procurement price calculations.

General and Specific Competences (Knowledge and Skills):

General: Understanding the principles of procurement operations, knowledge of legal and regulatory frameworks related to procurement, and acquisition of management skills for leading and managing procurement and supply under modern market conditions.

Specific: Emphasis on current trends in the use of modern information technologies.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Define the fundamental concepts related to procurement and supply operations.
2. Independently develop procurement policy, strategy, and objectives, and determine the most appropriate strategy for achieving them.

3. Master planning processes, operational planning, and procurement systems.
4. Establish and justify criteria for monitoring the effectiveness of procurement policy, planning, and inventory management.
5. Determine the position of procurement within a business system and define the organization of procurement processes.
6. Organize the entire procurement process.
7. Manage public procurement projects in the role of a contracting authority.
8. Organize procurement and supply market research.
9. Independently perform ABC, XYZ, and value analyses in procurement.

Required Reading:

1. Ferišak, V. (2006). NABAVA – politika, strategija, organizacija, management. 2nd updated and revised edition. Zagreb: Vlastita naklada.
2. Mačечеvić, D. (2019). Sustav nabave i opskrbe. Teaching materials. Velika Gorica: VVG.

Course title: Maintenance Management

Course Code:
LM303

Semester:
3

Lectures + Exercises + Seminar:
2 + 1 + 1

Total Hours:
60

ECTS Credits:
5

Course Objectives:

To acquire knowledge related to the effectiveness and management of the exploitation process of technical systems and assets (motor vehicles, aircraft, vessels, and others).

Course Content:

Fundamental concepts and definitions. Life cycle and logistics engineering. Maintenance costs. Effectiveness of technical systems: reliability, availability (readiness), and functional suitability. Maintainability. Concepts, models, types, and processes of maintenance. Operating conditions. Methods for determining technical condition. Processes and support for maintenance management. Safety and protection measures in maintenance.

General and Specific Competences (Knowledge and Skills):

General: Managing the maintenance system of technical assets within the logistics support process.

Specific: Defining specific maintenance requirements for technical systems and demonstrating appropriate skills in the application and management of maintenance systems.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Define performance and effectiveness requirements in system development and equipping.
2. Determine reliability parameters and maintainability factors.
3. Organize maintenance systems for technical assets.
4. Solve problems related to the management of technical system operation and maintenance.
5. Evaluate various transport means from the perspective of users and maintenance personnel.
6. Apply maintenance knowledge and skills within logistics systems.

Required literature:

1. Matijaščić, Z. (2012). Logističko inženjerstvo. Velika Gorica: Veleučilište Velika Gorica.

Course title: Project Management

Course Code:
LM304

Semester:
3

Lectures + Exercises + Seminar:
2 + 2 + 0

Total Hours:
60

ECTS Credits:
6

Course Objectives:

To acquire knowledge and skills for the successful management and implementation of projects using modern project management tools and methodologies.

Course Content:

Concept, nature, and context of projects. Methodology of research and professional project work. Project definition (project charter, scope, WBS, schedule, cost, quality, resources, communication, risks, procurement, stakeholders). Project integration management. Project scope management. Project time management. Project cost management. Project quality management. Project resource management. Project communication management. Project risk management. Project procurement management. Project stakeholder management. Project execution management process. Project examples. Independent or team work on complex projects. Preparation of project documentation. Project monitoring and closure. Project presentation and defense.

General and Specific Competences (Knowledge and Skills):

General: Managing projects through initiation, planning, preparation, implementation, and control phases. Mastery of fundamental project management terminology and techniques.
Specific: Students will be able to define specific project requirements and develop a project demonstrating appropriate managerial and technical skills. By acquiring knowledge of project proposal preparation, development, and defense, students will become capable of applying project management methodologies in practice.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Define project objectives.
2. Apply project development methodology.
3. Develop a project plan including tasks, timelines, costs, and resources within defined financial and time constraints.
4. Allocate project tasks according to the expertise of project team members.
5. Organize project activities (initiation, planning, execution, monitoring and control, closure).
6. Manage a project (integration, scope, time, cost, quality, resources, communication, risk, procurement, stakeholders).
7. Present project proposals, reports, or results to professional and/or public audiences.

Required literature:

1. A Guide to the Project Management Body of Knowledge (PMBOK Guide) – Fifth Edition, Project Management Institute (PMI), 2013.
2. PMI Combined Standard Glossary – Croatian localized version, Version 1.1, PMI Chapter Croatia.

Course title: Traffic and Transport Management

Course Code:
LM302

Semester:
3

Lectures + Exercises + Seminar:
2 + 1 + 1

Total Hours:
60

ECTS Credits:
7

Course Objectives:

To acquire knowledge related to traffic and transport management, particularly in complex and crisis conditions.

Course Content:

Historical development of traffic and transport.
Fundamental characteristics of traffic and transport systems.
Infrastructure of land transport systems.
Infrastructure of water and air transport systems.
Transport chains.
Modern transport technologies in road transport.
Modern transport technologies in rail, air, and water transport.
Transshipment operations and management of transshipment processes.
Road transport management.
Urban traffic management.
Combined transport management.
Passenger and cargo safety in transport.
Optimization of traffic and transport processes.
Logistics and logistics processes in transport.
Transport costs.
Traffic management in crisis situations (terrorist and combat conditions).
Traffic management in NATO-led operations.
Traffic management in support of NATO operations under Host Nation Support (HNS).
The freight forwarder as a transport organizer.

General and Specific Competences (Knowledge and Skills):

Ability to manage traffic operations, especially under crisis conditions.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Organize work processes within a logistics and transport company.
2. Manage transport chains across different modes of transport.
3. Manage transport costs within a logistics organization.
4. Critically assess and design optimization possibilities for traffic and transport processes.
5. Integrate knowledge of traffic and transport management with other areas of logistics systems.
6. Critically evaluate the advantages and disadvantages of different modes of transport.
7. Develop optimization strategies for transport processes.
8. Organize transport and traffic systems within a NATO operational environment.
9. Monitor and analyze available information sources related to traffic and transport.

Required literature:

1. Zelenika, R. (2006). Multimodal Transport Systems. Faculty of Economics, University of Rijeka.
2. Županović, I. (2002). Technology of Road Transport. Faculty of Transport and Traffic Sciences, University of Zagreb.
3. Barković, M., Škoti, B., & Spudić, R. (2015). Military Logistics. Velika Gorica University of Applied Sciences.

Course title: Inventory Management

Course Code:
LM301

Semester:	Lectures + Exercises + Seminar:	Total Hours:	ECTS Credits:
3	2 + 1 + 1	60	7

Course Objectives:

To acquire knowledge about warehouse systems and management of warehousing processes.
To become familiar with the main characteristics and concepts of warehouse operations.
To understand the theoretical principles, importance, and procedures of inventory management.

Course Content:

Introduction to inventory and warehouse management.
Classification of warehouses by ownership, location, construction type, type of goods, and storage technology.
Warehouse operations: receiving, storing, picking, and dispatching goods.
Information support in warehouse processes.
Warehouse equipment. Methods for calculating warehouse location.
Types of inventories, inventory standards and norms.
Inventory management models.
Inventory planning, ABC analysis of inventory.
Determination of inventory value.

General and Specific Competences (Knowledge and Skills):

General: Mastery of professional knowledge and skills for planning, organizing, and managing inventories.
Specific: Understanding warehouse systems, processes, and methods of organizing warehouse operations.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Calculate inventory requirements.
2. Analyze inventory management processes.
3. Propose an appropriate inventory management model within a logistics system.
4. Organize services and processes within a warehouse.
5. Analyze the efficiency of specific warehousing operations.
6. Propose solutions for warehouse processes and equipment.
7. Evaluate the advantages and disadvantages of existing warehousing systems.

Required literature:

1. Rogić, K., Stanković, R., & Šafran, M. (2012). Logistics Systems Management. Velika Gorica University of Applied Sciences, Velika Gorica.
2. Belak, V., et al. (2002). Inventory and Warehouse Management. RIF-plus, Zagreb.

Course title: Green Logistics

Course Code:
LM413

Semester:
4

Lectures + Exercises + Seminar:
2 + 1 + 0

Total Hours:
45

ECTS Credits:
5

Course Objectives:

To acquire knowledge in the field of waste management in logistics, including the handling and disposal of both non-hazardous and hazardous waste.

Course Content:

Environmental protection requirements and the importance of waste management.

Ecological aspects of non-hazardous and hazardous waste disposal in logistics.

Electrical and electronic waste.

Landfills. Waste collection. Monitoring, inspection, and protective measures.

Legislation, international conventions, and sources of pollution.

Types of waste. Hazardous military waste (unexploded ordnance, ammunition, radioactive sources, chemical waste, etc.).

Mobile storage units and neutralization equipment.

Military training grounds and environmental protection measures.

Industrial technologies for military waste management.

Technologies for destruction and recycling of hazardous and non-hazardous military waste.

New technologies for hazardous waste treatment.

Systems for incineration of hazardous military waste (explosives, chemically harmful substances, etc.).

Chemical neutralization methods.

General and Specific Competences (Knowledge and Skills):

Ability to apply knowledge and skills in managing military waste.

Learning Outcomes:

Upon successful completion of the course, students will be able to:

1. Identify quantities, volumes, and flows of waste and present them publicly.
2. Discuss the environmental impact of waste, emphasizing ethical responsibility.
3. Recognize the importance of waste recycling and present findings independently.
4. Present technologies for industrial military waste management while working in a multidisciplinary team.
5. Analyze the concept of comprehensive waste management through group work.
6. Categorize types of waste according to their properties and sources.
7. Plan procedures for handling hazardous military waste (unexploded ordnance, ammunition, radioactive sources, chemical waste, etc.).
8. Propose measures to minimize and prevent waste generation.
9. Differentiate between waste recovery processes and present them in groups.
10. Comment on basic laws and regulations related to environmental protection and waste management.

Required literature:

1. Kalambura, S., Krička, T., & Kalambura, D. (2011). Waste Management. Velika Gorica.
2. Kalambura, S. (2016). Lecture Notes for the Course Waste Disposal. Velika Gorica.