SYLLABUS "LOGISTICS AND QUALITY MANAGEMENT"

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Department responsible for the course or equivalent: Institute of Management in Economic, Ecological and Social Systems; Department of Business Economics

Semester when the course unit is delivered: 2nd

Level of course unit: Master level

ECTS credits: 5

ADMISSION REQUIREMENTS

Applicants are expected to have completed the following courses:

- Modern management technologies;
- Project Management and Change Management;
- Fundamentals of Production Management.

COURSE OBJECTIVES (AIMS)

- formation of the knowledge of the student about the basic concepts, goals, objectives, methodology, principles, tools for managing material flows and quality;
- management of the logistics divisions of enterprises and organizations of various forms of ownership, state and municipal authorities;
- analysis of existing forms of organization and logistics management processes, development and justification of proposals for their improvement.

COURSE CONTENTS

Module 1. Theoretical aspects of logistics

Session 1. Conceptual and methodological foundations of logistics management. Logistics: history, concepts, novelty, specificity. Logistics development factors. Stages of development of logistics. Sources of economic benefits from the use of logistics. Flows in logistics. Logistic operations. Logistic systems. Object, subject, goals, objectives and functions of logistics. The principles of logistics. Integration of logistics activities. System analysis. Cybernetic approach. Operations research. Forecast Methods for solving logistic problems. Strategic logistic planning. Capacity

planning. Planning the placement of infrastructure elements. Generalized and short-term planning.

Session 2. Procurement logistics, production logistics: goals, objectives and tools. Goals and objectives of procurement logistics. Information tasks of procurement logistics. Organizational issues of the supply department. Pulling and pushing logistics systems. Material Requirement Planning (MRP). Resource Planning (MRP II) and Enterprise Needs Planning (ERP). Just-in-time (JIT) concept. The concept of effective customer response (ECR). The goals and objectives of production logistics. The main problems of production logistics. Overview of enterprise management systems. Production management system as exemplified by Toyota. Organization of material flows in production. Organization of the production process in time.

Session 3. Distribution logistics, transport logistics: goals, objectives and tools. Tasks of distribution logistics. Logistic channels and distribution chains of goods. Types of intermediaries in distribution channels. Determining the optimal number of warehouses in the distribution system. Making a decision to build a distribution system. Options for the organization of marketing activities. Tasks of transport logistics. Logistic policy of the organization of transport enterprises. The choice of vehicle type. Transport rates.

Session 4. Logistics of stocks, logistics of warehousing: goals, objectives and tools. Inventories: relevance, typology, issues. Inventory management models. Definition and classification of warehouses. Logistic functions and operations in warehouses. Logistic process in the warehouse. Tasks of the effective organization and functioning of the warehouse. Cargo unit as an element of logistics.

Session 5. Service logistics, information logistics: goals, objectives and tools. Formation of a logistics service system. Criteria for the quality of logistics services. A generalized assessment of the level of logistics services. Information flows in logistics. Logistics Information Systems. The principles of building information systems in logistics.

Module 2. Applied aspects of logistics

Session 6. The quality management system in the organization and its components. The concept of quality and its aspects. Quality management system model (QMS), principles and components. Management of organizational changes during the implementation of the QMS in the enterprise. A series of improvements Shewhart -Deming. Quality cost structure.

Session 7. The concept and principles of Total Quality Management. The main idea, relevance, mechanisms, principles of the concept of Total Quality Management. Principles of Edward Deming. Project management of the implementation of Total Quality Management in the enterprise.

Session 8. Overview of quality management tools. Quality control methods and tools: checklist, graphs, histograms, Pareto chart, scatter chart, Shewhart control cards, Ishikawa chart.

Session 9. Summarizing the course.

LEARNING OUTCOMES

Knowledge:

- the nature, significance and role of the logistics management of the enterprise;
- the content, nature, significance and role of quality management in the enterprise;

Abilities:

- conduct an analysis of existing forms of organization and processes of logistics management, development and justification of proposals for their improvement;

Skills:

- the basic methods of managing the logistics departments of enterprises and organizations of various ownership forms, state and municipal authorities.

PLANNED LEARNING ACTIVITIES AND TEACHING METHODS

Educational technologies used in the study of the discipline provide for the use of active and interactive forms of classes in the educational process, namely:

- interactive lectures;
- practical classes with:
  - discussion on problematic issues;
  - students' presentations on problem-oriented topics;
  - solving practical cases related to management problems.

Educational technologies include the use of e-learning and distance learning technologies. Microsoft Teams will be used to create a remote workspace for collaboration and real-time communication, meetings, messaging, files and applications. For the offline interaction form, e-mail and group chats on VK are used.

In the course of independent work, students are recommended to use the materials of the on-line Management Fundamentals course https://www.coursera.org/learn/management-fundamentals-healthcare-administrators

The following activities are carried out for independent work:

- repetition of lecture material;
- search for scientific and technical information in open sources in order to analyze and identify key features;

- preparation for practical exercises and problem solving with the involvement of basic and additional literature;
- preparation for the Colloquium;
- preparation for the exam.

ASSESSMENT METHODS AND CRITERIA

Criteria for evaluation:

Class Participation

The maximum number of points for a lecture of the semester is 9 points, 5 points for a module 1 and 4 points for a module 2.

- 1 point for attending one lecture lesson.

Practical Tasks Assignments

The maximum number of points for practical tasks of the semester is 32 points; 18 points for a module 1 and 14 points for a module 2; 2 points for a practical class.

- 2 points - full, detailed answers are given to the questions posed, the ability to distinguish significant and non-essential features, cause-effect relationships is shown. The answer is clearly structured, logical, stated in terms of science. Finished conclusions and generalizations on the issue. Comprehensive answers to clarifying questions.
- 1.5 points - full, detailed answers to the questions posed are given, the ability to distinguish significant and non-essential features, cause-effect relationships is shown. The answer is clearly structured, logical, stated in terms of science. However, minor errors or shortcomings were made, corrected by the student with the help of "leading" questions of the teacher.
- 1 point - given complete but not consistent answers to the question, but at the same time shown the ability to identify significant and non-essential signs and cause-effect relationships. The answer is logical and stated in terms of science. 1-2 errors can be made in determining the basic concepts that the student finds it difficult to fix on his own.
- 0,5 point - given an insufficiently complete and insufficiently detailed answer. The logic and sequence of presentation have violations. Errors were made in the disclosure of concepts and in the use of terms. The student is not able to independently identify significant and non-essential features and cause-effect relationships. A student can specify generalized knowledge by proving their basic principles using examples only with the help of a teacher. Speech design requires amendments, corrections.

- 0 points - no answers were received on the issues discussed.

Colloquium

The colloquium includes an oral answer to 10 questions (10 points) in module 1 and 7 questions (7 points) in module 2, the maximum score for a question is 1 point.

- 1 point - a complete, detailed answer is given to the question posed, the ability to distinguish essential and non-essential features, cause-effect relationships is shown. The answer is clearly structured, logical, stated in terms of science. Finished conclusions and generalizations on the issue. Comprehensive answers to clarifying questions.
- 0,75 points - a complete, detailed answer is given to the question posed, the ability to distinguish significant and non-essential features, cause-effect relationships is shown. The answer is clearly structured, logical, stated in terms of science. However, minor errors or shortcomings were made, corrected by the student with the help of "leading" questions of the teacher.
- 0,5 points - a complete but not consistent answer is given to the question posed, but the ability to identify significant and non-essential signs and cause-effect relationships is shown. The answer is logical and stated in terms of science. 1-2 errors can be made in determining the basic concepts that the student finds it difficult to fix on his own.
- 0,25 points - given an insufficiently complete and insufficiently detailed answer. The logic and sequence of presentation have violations. Errors were made in the disclosure of concepts and in the use of terms. The student is not able to independently identify significant and non-essential features and cause-effect relationships. A student can specify generalized knowledge by proving their basic principles using examples only with the help of a teacher. Speech design requires amendments, corrections.
- 0 points - No answers were received on the basic questions of the colloquium.

Exam

The maximum score for an exam is 40 points.
Part 1-written answer (20 points) for answers to 2 questions in the ticket (10 points for 1 question).
Part 2-oral answer (20 points) to questions (10 points for 1 question).

- 22-28 points – Competence is formed. The student has a general idea of the type of activity, the basic laws of functioning of objects of professional activity, methods, and algorithms for solving practical problems.

- 29-34 points – Competence is formed. The student can solve typical problems, make professional and managerial decisions according to well-known algorithms, rules, and techniques;
- 35-40 points – Competence is formed. The student is ready to solve practical problems of increased complexity, atypical tasks, make professional and managerial decisions in conditions of incomplete certainty, with insufficient documentary, regulatory and methodological support.

COURSE LITERATURE (RECOMMENDED OR REQUIRED)

1. Isayev G. N. Information System Quality Management: a Theoretica approach: monograph / G.N. Isayev - Prague: Animedia Company, 2019 .-- 290 p. http://biblioclub.ru/index.php?page= book & id = 562669
2. Management of production quality in international corporations: workshop - Stavropol: SKFU, 2016. - 167 p. http://biblioclub.ru/index.php?page= book & id = 459317
3. Logistics / S.M. Mochalin - M. | Berlin: Direct Media, 2016 .-- 168 p. http://biblioclub.ru/index.php?page= book & id = 439692
4. Levkin G. G. Logistics: textbook / G. G. Levkin - Moscow | Berlin: Direct Media, 2018 .- 282 p. http://biblioclub.ru/index.php?page= book & id = 495094
5. Ginis, L. A. Statistical methods of quality control and management. Application software [Text]: textbook. allowance - Rostov n / D-Taganrog: Publishing house of SFU, 2017. - 82 p.
6. Quality management [Text]: textbook. allowance for students. universities - M .: INF RA-M, 2010 .-- 330 p.
7. Samorukov V. I. Quality management. International quality management systems: workbook / V.I. Samorukov; Ministry of Agriculture of the Russian Federation; St. Petersburg State Agrarian University - St. Petersburg: SPbGAU, 2019 .-- 93 p. http://biblioclub.ru/index.php?page= book & id = 560934
8. Garanin S. N. International transport logistics / S.N. Garanin - Moscow: Altair | MGAVT, 2015 .-- 73 p. http://biblioclub.ru/index.php?page= book & id = 429740