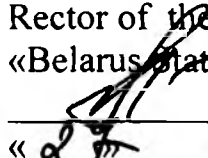


APPROVE

Rector of the Educational Establishment
«Belarus State Economic University»


V.Y. Shutilin

« 27 12 2019 » 2019.

Registration № 4228-19 /st.

QUALITY MANAGEMENT

the study programme
Major: 1-26 80 03 Business administration
profile Business administration
(in English language)

DEVELOPER:

V.M. Avechkina, associate professor of the Department of Logistics and Pricing Policy of the Educational Establishment «Belarus State Economic University», Ph. D. (Economics), associate professor.

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RECOMMENDED FOR APPROVAL:

By the Department of Logistics and Price Policy of the Educational Establishment «Belarus State Economic University»
(protocol № 4, 14.11.2019)

Scientific and Methodical Council of the Educational Establishment «Belarus State Economic University»
(protocol № 3 20.12.2019)

EXPLANATORY NOTE

The educational programme is elaborated in accordance with the standards of economic specialties approved by the Ministry of Education of the Republic of Belarus, and curriculum for the specialty 1-26 80 03 Business administration (profile Business administration), approved by Rector of the Educational Institution «Belarusian State Economic University» (25.03.2019, registration № 50MGR-19).

Quality is one of the most important factors within the business to achieve success. Quality management is demanding to adapt to the ever-changing environment.

The purpose of the discipline is the formation a holistic and comprehensive system of theoretical and practical foundations of quality management for effective business, ensuring the competitiveness of the company in the economy of quality.

Objectives of the discipline:

- learning the quality management methodology;
- forming the knowledge of quality management system based on standardization and specification;
- mastering the mechanism of integration of quality management with business objectives and public interests on the basis of the principles of total quality management (TQM);
- acquisition the skills of using quality management methods to resolve typical professional tasks.

The results of studying the discipline:

Knowledge

Students will learn about:

- the methodological aspects of quality, including compliance with standard' requirements;
- the designated purpose and mechanism of quality management;
- quality assurance tools and methods relevant to the functioning of the organization;
- methods of analysis and assessment of the Quality Management System.

Skills

Students shall be able to:

- use the most common methods for quality analysis and assessment;
- take into account the peculiarities of the business environment in quality management;
- ensure Quality Management System with operational information;
- determine a quality management strategies for business systems;
- make management decisions in the Quality Management System;
- utilize skills in the establishment, implementation and management of systems business quality assurance.

Competency

Students shall be capable of managing:

- business processes and systems on the basis of the principles of Total Quality Management (TQM);
- to generate motivation with the implementation of quality management methods and processes in the business;
- activities to build a business quality culture.

The study of the discipline will allow to apply the acquired knowledge in further scientific and practical activities in the field of business administration. The course is focused on forming skills of analysis, check and assessment of the quality management results.

Discipline «Quality Management» is based on knowledge of management of the organization, strategic management, marketing management.

Total hours of discipline – 198 hours (6 credits), of which a total of classroom hours – 64, including 32 hours – lectures, 32 hours – practical class.

Form of control – exam.

**THE THEMATIC PLAN OF THE DISCIPLINE
«QUALITY MANAGEMENT»**

| № | The name of the theme | Number of hours | |
|------------------------------|---|-----------------|-----------------|
| | | Lectures | Practical class |
| 1. | Quality management concept content and evolution | 4 | 2 |
| 2. | System of international quality standards (ISO) | 4 | 2 |
| 3. | Quality Management System (QMS) as part of the overall management system of the company | 4 | 4 |
| 4. | Quality as a social and economic category | 4 | 4 |
| 5. | System of Quality Economics. Economic aspects of quality management | 4 | 4 |
| 6. | Quality Management System (QMS) development and implementation | 4 | 6 |
| 7. | Functioning of the Quality Management System | 4 | 6 |
| 8. | Quality improvement | 4 | 4 |
| Total classroom hours | | 32 | 32 |

CONTENTS

1 Quality management concept content and evolution

Definition and standardization of the notions of «quality» and «quality object» (ISO 9000). «Pyramid of quality». Quality assurance methods: conformance to standard, conformance to application, conformance to cost, conformance to needs.

Economic content of quality management in conditions of market competition. Relationship of marketing and quality management.

Quality management concept evolution: XIX century-20-ies of XX century – the stage of «episodic» application of quality management; 20-40-ies of XX century – quality management systems formation stage (focused on the end product and based on Statistical Process Control (SPC) of the product quality); 40-80-ies of XX century – stage of Total Quality Management (TQM) as a «business philosophy» of a company, or «Customer focus»; since 90-ies of XX century – quality planning stage based on International Quality Standards ISO (International Organization for Standardization) the 9000, 14000, 45000, 50000 families. Contribution of Americans Frederick W. Taylor, W. Edward Deming, Joseph Juran, Armand V. Feigenbaum, Philip Crosby, Malcolm Baldrige, of Japanese Kaoru Ishikawa, Genichi Taguchi to the development of the theory and practice of Quality Management.

2 System of international quality standards (ISO)

International Organization for Standardization (ISO).

The main international standards of quality assessment. Standardization of terminology in the field of quality. Implementation of the principles of E. Deming in ISO standards.

Structure, content and scope of 9000 series standards ISO. Supporting standards. The evolutionary nature of standards. Distinctions of standards of series 9000 of different years of the edition (2000 and 2015). Structure, content and scope of 14000 series standards ISO. Structure, content and scope of the 45000 series standards ISO. Structure, content and scope of 50000 series standards ISO.

The European model of excellence.

Awards and competitions in the field of quality: goals, objectives and procedure of participation. E. Deming' Prize. Malcolm Baldrige National Quality Award. European Quality Award.

3 Quality Management System (QMS) as part of the overall management system of the company

The methodology of the Quality Management System (QMS). Principles of systemic and process-centric approaches.

Elements of the Quality Management System (QMS): organization; processes; documents; resources.

Quality management system (QMS) organization. The structure of the Quality Management. The main Quality Management components: quality policy, quality planning, quality assurance, quality control and quality improvement.

Quality management system (QMS) process as a set of interrelated and interacting elements that transform «inputs» into «outputs». The concept of process «input» and «output». Determination of internal and external consumers.

Quality management system (QMS) documentation: Quality manual, Quality policy and objectives, Mandatory documented procedures, Regulations of processes and procedures, working instructions, Quality records.

Team-wide (collective) principle as the basis of the functioning of the Quality Management System.

4 Quality as a social and economic category

Quality as a means of customer satisfaction and achieving the organization's market competitive advantage.

Two distinct types of customers: external (physical person or legal person) and internal (within the company/staff). Customer satisfaction – the purpose of the organization.

The main quantitative and qualitative characteristics of quality of the product (service): functionality, reliability, durability (service life), safety, environmental friendliness, convenience, aesthetic properties (design), availability of guarantees and additional services.

Quality components: quality consumer focus (determination of market needs), quality of product (service) design, quality of production process, conformity of final product quality to the project, quality of service.

Total quality management (TQM) strategy. Integration of TQM tasks with business tasks and public interests (ecology, safety).

5 System of Quality Economics. Economic aspects of quality management

The principle of harmonization of goals and processes in the System of Quality Economics.

The main elements of the total quality costs: costs of preventive measures, costs of control measures, internal costs of defects elimination, external costs of defects elimination.

Methods of analysis of quality costs: analysis and assessment of losses due to poor quality at different stages of the product life cycle; analysis of potential sources of losses; analysis and assessment by types of quality costs; analysis of quality costs by types of activity; analysis of process-related quality costs.

Assessment of the impact and relationship of quality costs with the economic performance of the organization. General criteria: the ratio of the value of quality costs to sales value, profit, cost value and to the previous period value quality costs. Specific criteria: the ratio of the types of quality costs amongst themselves (in accordance with the classification); the ratio of the cost of quality improvement to the

value of the expected profit; the ratio of losses from discrepancies to the cost of their elimination.

Identification of reserves of optimization of quality costs.

6 Quality Management System (QMS) development and implementation

Stages of development of Quality Management System: preparations of the establishing of QMS; comprehensive analysis of quality management of products and services and the development of conceptual model of QMS; the development of documentation; implementation of QMS; QMS certification.

The first stage tasks (preparations for the establishing of QMS): the creation of the organization' policy in the field of quality; formation of the organizational structure of the QMS; staff training on ISO requirements; the timing and cost evaluation of the QMS development and implementation; engagement of consultants (if necessary).

The second stage tasks (the development of conceptual model of QMS): analysis of the existing management system of the organization; development of the conceptual model of QMS, restructuring, determination of functions and business processes; distribution of responsibilities and powers.

The third stage tasks (the development of documentation): scheduling the development of documented procedures, appointment of those responsible for the development of procedures.

The fourth stage tasks (implementation of QMS): training of personnel to work in the conditions of QMS functioning; testing of the QMS documentation; internal audit of the QMS; identification and correction of QMS functioning discrepancies.

The fifth stage tasks (QMS certification): the choice of the certifying authority and submission of application for certification; preparation of the required package of documents; external audit; the elimination of discrepancies.

7 Functioning of the Quality Management System

Resources that ensure the functioning of the QMS: qualified employees, functioning system of personnel interaction (unified team of professionals), material and technical resources, financial resources.

Organizational structure of the Quality Management System. Functions, powers and responsibilities of the head of the Quality Management System. The Leadership duties: creating and sustaining a caring culture, planning and designing of processes, allocating resources and building infrastructure, monitoring and improving quality and safety.

System and principles of planning in the QMS. Quality planning. Quality strategies.

Types of the QMS processes: the main business processes (for transformation «inputs» into «outputs»), supporting processes (for transformation of incoming resources into that providing internal consumers), management processes for continuous improvement of the organization. Information model of the process.

Functional model of the process. Organization of the QMS processes and procedures management: establishing the responsibilities for managing the process; identification of key business processes; establishing the sequence, order and interaction of processes; identification the criteria and methods that are necessary for efficiency operation and management of processes; providing resources and information to support the operation and monitoring of processes; process monitoring, analyzing and assessment; taking the measures necessary to achieve the planned results and improvement of processes.

Quality assurance as an indicator of the maturity of the QMS. Types of quality assurance. Assessment and confirmation of compliance with ISO requirements.

Types and methods of QMS control. Objects of QMS control. Self-assessment of QMS. Objectives, criteria, scope and objects of audit. The principles of auditing. Methods and types of audit. Duties, responsibilities and rights of the auditor. Audit program. The procedure of audit.

8 Quality improvement

The basis of the process approach is the relationship of the following processes: management responsibility; resource management; product realization; measurement, analysis and improvement.

The necessity to evolve and improve the QMS in accordance with ISO requirements.

ISO principles: customer orientation, leadership by the management of the organization, participation of all employees, systemic approach to both quality and QMS, continuous quality improvement process, policy change and data-driven decision-making, interaction with suppliers.

Product certification. QMS certification.

The order and sequence of operations to improve the QMS: establishing the responsibilities for managing the process, definition the process, identification customer requirements, establishing measures of process performance, compare process performance with customer requirements, identification of process improvement opportunities, improvement process performance, the establishment quality improvement teams to pursue specific improvement opportunities.

The activities of the quality improvement teams: clarifying the improvement opportunity problem statement, schedule and budget; determination the root causes of problems; the development and implementation countermeasures to reduce or eliminate the occurrence of root causes; stabilization the process at the new level of performance.

Corporate culture of quality. Professional characteristics of quality manager. Lean production. Allocation of responsibility for quality and knowledge management as necessary conditions for the QMS improvement. Customer Relationship Management. Practical application of International Quality Standards ISO 14000, 45000, 50000 families.

CURRICULUM MAP OF THE STUDY COURSE «QUALITY MANAGEMENT»
Major 1-26 80 03 Business Administration
(full-time education)

| Number of Topic | Course content | Quantity of hours | | | | | | Other | The form of knowledge control |
|-----------------|---|-------------------|-------------------|----------|-----------------|---------------------------|-------------------|---------------------------------------|--|
| | | Lectures | Practical classes | Seminars | Laboratory work | Managing independent work | | | |
| | | | | | | Lectures | Practical classes | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | Quality management concept content and evolution 1. Definition and standardization of the notions of «quality» and «quality object» (ISO 9000). 2. Relationship of marketing and quality management. 3. Quality management concept evolution. 4. Contribution of Americans and Japanese to the development of the theory and practice of Quality Management. | 2 | - | - | - | 2 | 2 | Presentations and handout [1,2,3,4,8] | Case study. |
| 2 | System of international quality standards (ISO) 1. International Organization for Standardization (ISO). 2. The main international standards of quality assessment. 3. Structure, content and scope of 9000, 14000, 45000, 50000 series standards ISO. 4. The European model of excellence. 5. Awards and competitions in the field of quality. | - | 2 | - | - | 4 | - | Presentations and handout [1,2,3,4,8] | Individual presentation. Thematic study report. |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3 | Quality Management System (QMS) as part of the overall management system of the company 1. The methodology of the Quality Management System (QMS). 2. Elements of the Quality Management System (QMS). 3. Quality management system (QMS) organization. 4. Quality management system (QMS) processes. 5. Quality management system (QMS) documentation. 6. Team-wide (collective) principle. | 2 | - | - | - | 2 | 4 | Presentations and handout [1,2,3,4,5,6,8] | Individual presentation. Case study report. |
| 4 | Quality as a social and economic category 1. Quality as a means of customer satisfaction and achieving the organization's market competitive advantage. 2. Two distinct types of customers in QMS. 3. The main quantitative and qualitative characteristics of quality of the product (service). 4. Quality components. 5. Total quality management (TQM) strategy. | 2 | | - | - | 2 | 4 | Presentations and handout [1,2,3,4,6,8] | Individual presentation. Case study. |
| 5 | System of Quality Economics. Economic aspects of quality management 1. The principle of harmonization of goals and processes in the System of Quality Economics. 2. The main elements of the total quality costs. 3. Methods of analysis of quality costs. 4. Assessment of the impact and relationship of quality costs with the economic performance of the organization. 5. Identification of reserves of optimization of quality costs. | 2 | | - | - | 2 | 4 | Presentations and handout [1,5,6,8] | Individual presentation. Case study report. |
| 6 | Quality Management System (QMS) development and implementation 1. Stages of development of Quality Management System. 2. Preparations for the establishing of QMS. 3. The development of conceptual model of QMS. | 2 | 2 | - | - | 2 | 4 | Presentations and handout [1,2,3,4,5,6,7,8] | Project |

| | | | | | | | | | |
|---|---|-----------|----------|----------|----------|-----------|-----------|---|-------------|
| | 4. The development of documentation. 5. Implementation of QMS. 6. QMS certification. | | | | | | | | |
| 7 | Functioning of the Quality Management System 1. Resources that ensure the functioning of the QMS. 2. Organizational structure of the Quality Management System. 3. System and principles of planning in the QMS. 4. Types of the QMS processes. Organization of the QMS processes and procedures management/ 5. Quality assurance as an indicator of the maturity of the QMS. 6. Types and methods of QMS control. QMS audit. | 2 | 2 | - | - | 2 | 4 | Presentations and handout [1,2,3,4,5,6,7,8] | Project |
| 8 | Quality improvement 1. The necessity to evolve and improve the QMS in accordance with ISO requirements. 2. Product certification. QMS certification. 3. The order and sequence of operations to improve the QMS. 4. The activities of the quality improvement teams. 5. Corporate culture of quality. Professional characteristics of quality manager. 6. Practical application of International Quality Standards ISO 14000, 45000, 50000 families. | - | 2 | - | - | 4 | 2 | Presentations and handout [1,2,3,4,5,6,7,8] | Project |
| | Total | 12 | 8 | - | - | 20 | 24 | | Exam |

INFORMATION AND METHODOLOGICAL PART

Methodological recommendations of the organization of independent work of students for the course «Quality management»

The independent students work is an important element of providing profound knowledge on logistics topics. The recommended time for independent work is on average 2-2,5 hours for a two-hour auditory study.

The main directions of the student's independent work are:

- first-hand view of study program;
- first-hand view of literature recommended, its availability in the library and from other sources;
- carrying on research on given by the lecturer material, reading additional literature and searching for more information;
- studying and expanding the lecture material through special literature and consultations;
- preparation for practical classes with specially developed plans through the study of main and additional literature;
- preparation for distant forms of control (independent individual work, presentations, business tasks solutions, case studies, tests and other tasks);
- preparation for the diagnostic forms of control (tests, etc.);
- preparation for the test.

LIST OF RESOURCES


Basic

1. ISO 9000: Quality Management Systems: Fundamentals and vocabulary. – Geneva, Switzerland, 2015. – 51 p.
2. ISO 14000 family: Environmental Management. – Geneva: ISO Central Secretariat, Switzerland, 2015. – 11 p.
3. ISO 45001: Occupational Health and Safety Management System: Migration Guide. – Geneva: ISO Central Secretariat, Switzerland, 2018. – 6 p.
4. ISO 50001: Energy Management System Standard. – Geneva: ISO Central Secretariat, Switzerland, 2018. – 14 p.
5. Cardone, G. The 10 X Rule. The Only Difference Between Success and Failure. / G/ Cardone. – N-Y: J/ Wiley & Sons limited, 2017. – 254 p.
6. Hughes, M. Managing and Leading Organizational Change. / M. Hughes. – Brighton, 2018. – 334 p.
7. Lencioni, P. The Five Dysfunctions of a Team. / P. Lencioni. – N-Y: J/ Wiley & Sons limited, 2018. – 243 p.
8. Shipovskaya, A.A. English for quality management and standardization: textbook. / A.A. Shipovskaya. – Tambov, 2017. – 246 p.

Additional

1. Callan, J. Changes: secrets to positive shifts for organizations and their leaders. / J. Callan, 2007. – 112 p.
2. Hacker, S. , Willard, M. From trust to sustainable business. / S. Hacker, M. Willard., 2009. – 144 p.
3. English for Special Purposes: Decision-Macking Issues: пособие. / сост. А.И. Мицкевич. – Минск, 2019. – 48 с.
4. Zehir, C., Sadikoglu, E. Relationships among total quality management practices: an empirical study in Turkish Industry / C. Zehir, E. Sadikoglu // International Journal of Performability Engineering, vol. 8, 2012. – № 6. – P. 667–678.

The study program coordination protocol to other study disciplines of the specialization

| Study discipline for coordination | Department | Suggestions of the alterations in the study program contests | The solution was taken the Department according to the study program (data and protocol number) |
|-----------------------------------|----------------------|--|---|
| Marketing Management | Marketing Department | No remarks  | Protocol № <u>4</u> from <u>14.11</u> 2019 r. |

Supplements and alterations to the study program of the study discipline
for 20__ / 20__ academic year

| № | Supplements and alterations | Grounds |
|---|-----------------------------|---------|
| | | |

The study program is recommended to approve by the Department of Logistics and Price Policy of Belarus State Economic University (Protocol № __ from _____20__).

Head of the Department of Logistics and Price Policy

Signature

Name

APPROVED

Director of Institute of Masters Programs:

Signature

Name