



Syllabus Course Program



Total Quality Management

Specialty

073 – Management

Educational program

Business-administration

Level of education

Master's level

Semester

1

Institute

Institute of Education and Science in Economics,
Management and International Business

Department

Management (204)

Course type

Special (professional), Elective

Language of instruction

English

Lecturers and course developers

**Olena Prokhorenko**

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PhD in Economic Sciences, Associate Professor, Head of Department of
Management

Authored and co-authored over 60 scientific and methodological publications.
Senior lecturer of courses "Strategic Change Management", "Self-
Management", "Business Diagnostics"

More about the lecturer on the department's website

<https://web.kpi.kharkov.ua/mto/about/staff/prokhorenko-2/>

General information

Summary

The course is aimed at mastering the philosophy, approaches and methods of total quality management (TQM) as well as methods and tools used in the planning, design, implementation and development of quality management systems (QMS) in accordance with the requirements of international standards ISO 9001 series.

Course objectives and goals

To provide students with theoretical knowledge and practical skills in the application of general principles, approaches and methods of projection, development, implementation, certification and continuous improvement of QMS in accordance with the provisions of ISO 9001 series.

Format of classes

Lectures, workshops, consultations, self-study, individual task. Final control in the form of an exam.

Competencies

GC04. The ability to motivate people and to move towards a common goal

GC05. The ability to act on the basis of ethical considerations (motives)

SC1. The ability to choose and use relevant management concepts, methods and tools, in particular those corresponding to the set goals and international standards

SC2. The ability to define values, vision, mission, goals and the criteria, which can be used by an organization for choosing directions for future development, to create and implement corresponding strategies and plans

SC3. The ability for self-development, life-long learning and effective self-management

SC5. The ability to create and organize effective communications in the management process //

SC8. The ability to use psychological technologies for working with personnel

SC10. The ability to manage an organization and its development

SC2.1. The ability to assess the **efficiency** of an enterprise's functional areas and to choose the ways for improving it

SC2.2. The ability to manage an enterprise's business-processes, including the selection of the most **efficient** supplier either inside or outside the organization.

Learning outcomes

PO01. To critically assess, select, and use appropriate scientific, methodological and analytical tools for managing under conditions of unpredictability

PO03. To design **effective** management systems for organizations

PO04. To justify and manage projects, generate entrepreneurial ideas

PO07. To organize and carry out effective communications within the team, with representatives of various professional groups and in the international context

PO10. To demonstrate leadership skills and the ability to work in a team, interact with people, influence their behavior for solving professional tasks

PO11. To ensure professional self-development and personal time planning

PO12. To be able to delegate authority and **management** of an organization (unit)

PO13. To be able to plan and provide informational, methodological, material, financial and staffing support for an organization (unit)

PO2.1. To be able to assess the **effectiveness** of functional areas of an enterprise

PO2.2. To be able to assess the **efficiency** of business processes of an enterprise and to select the most **efficient** supplier either within or outside the organization

PO2.3. To be able to manage an enterprise's business processes on the basis of the TQM principles

Student workload

The total volume of the course is 120 hours (4 ECTS credits): Lectures - 32 hours, workshops - 16 hours, self-study - 72 hours.

Course prerequisites

PT1 Management of organizations

Features of the course, teaching and learning methods, and technologies

Presentations, discussions, workshops, case-based learning, individual and teamwork, research work. Study materials are available to students through OneDrive, Google-classroom.

Program of the course

Topics of the lectures

Lecture 1. Review of trends and prospects for the development of quality management in Ukraine and in the world. Quality management evolution

Lecture 2. Primary elements of TQM. Benefits of TQM. W. Edward Deming's 14 points for TQM

Lecture 3. Lean Manufacturing and Total Quality Management (part 1)

Lecture 4. Lean Manufacturing and Total Quality Management (part 2)

Lecture 5. PDCA technology and process approach

Lecture 6. ISO standards for management systems. The concept of quality management systems (QMS).

Lecture 7. Review of the structure, analysis of the scope and conditions of application of the ISO 9001 standard. ISO 9004. Compatibility with standards for other management systems

Lecture 8. Stages of QMS formation and implementation. Identification of processes required for QMS.

Lecture 9. Relationship and interaction of QMS processes, indicators and methods of monitoring their effectiveness. Modeling and graphical display of QMS processes. IDEF0 methodology.

Lecture 10. Requirements of the ISO 9001 standard for documentation and for the activities of senior management

Lecture 11. Quality policy and goals. Guidelines for quality: purpose, structure, basic approaches to creation

Lecture 12. Provision of resources. Requirements of the ISO 9001 standard for production planning

Lecture 13. Requirements of the ISO 9001 standard for the organizing of procurement.

Lecture 14. Requirements of the ISO 9001 standard for product development (production, services), for product quality control processes

Lecture 15. Requirements of ISO 9001 for measuring and monitoring the effectiveness of QMS processes. QMS certification.

Lecture 16. Corrective and preventive actions. Improvement.

Topics of the workshops

Workshop 1. Writing essay " How I understand quality management and what are its benefits for the organization?" and discussion

Workshop 2. "Fishbone", "5 "WHY?"

Workshop 3. "A3 Problem solving".

Workshop 4. Initiation of the QMS project. Regulation of the working group, QMS formation project. Case study

Workshop 5. The structure of the documentation. Registers of risks and opportunities

Case study. Written assignments. Discussions

Workshop 6. Defining requirements for products and services. Design and development of new products and services. Verification and validation in the process of development and research. Case study. Written assignments. Discussions

Workshop 7. Evaluation and rating of suppliers. Audit of suppliers. Case study. Written assignments

Workshop 8. Determining and analyzing the degree of satisfaction of consumer requirements. Non-compliant product management. Case study. Written assignments

Topics of the laboratory classes

no laboratory classes.

Self-study

Writing a critical essay " How I understand quality management and what are its benefits for the organization?".

Review of the structure, analysis of the scope and conditions of application of the ISO 9001 standard. ISO 9004. Compatibility with standards for other management systems

Plotting Gantt's chart for QMS implementation

Preparation to discussion "The role and importance of the senior management representative in the QMS"

Reviewing technological documentation: Technological regulations, technical conditions, specifications

Developing Questionnaire as a method of gathering information

Completion of an individual task

Final online quiz.

Course materials and recommended reading

- 1 ISO 9001:2015 Quality management systems — Requirements
- 2 ISO 9000:2015 Quality management systems — Fundamentals and vocabulary
- 3 <http://www.iso.org/iso/home.html>;
- 4 <http://www.irca.org/>;
- 5 ISO 9001:2015 in Plain English by Craig Cochran
- 6 Total Quality Management: Key Concepts and Case Studies (D.R Kiran, 2016).

- 7 Conformity assessment. Requirements for bodies providing audit and certification of management systems : ISO/IEC 17021:2011 – [Valid from 2011-02-01]. – Second edition, 2011. – 44 p
- 8 The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer by [Jeffrey Liker](#) McGraw Hill; 2nd edition (December 1, 2020)
9. Шаповал, М. І. Менеджмент якості: підруч. / М. І. Шаповал. – К. : Знання, 2013. – 484 с.
- 10 Unlocking Lean Six Sigma: A Competency-Based Approach to Applying Continuous Process Improvement Principles and Best Practices by Dr. Wesley E. Donahue, Kindle Edition

Assessment and grading

Criteria for assessment of student performance, and the final score structure

100% Final assessment as a result of final test (20%) and Continuous assessment (80%).

- 40% practical assessment (including problem sheets, reporting on individual work, and case-studies);
- 40% individual task.

Grading scale

Total points	National	ECTS
90–100	Excellent	A
82–89	Good	B
75–81	Good	C
64–74	Satisfactory	D
60–63	Satisfactory	E
35–59	Unsatisfactory (requires additional learning)	FX
1–34	Unsatisfactory (requires repetition of the course)	F

Norms of academic integrity and course policy

The student must adhere to the Code of Ethics of Academic Relations and Integrity of NTU "KhPI": to demonstrate discipline, good manners, kindness, honesty, and responsibility. Conflict situations should be openly discussed in academic groups with a lecturer, and if it is impossible to resolve the conflict, they should be brought to the attention of the Institute's management.

Regulatory and legal documents related to the implementation of the principles of academic integrity at NTU "KhPI" are available on the website: <http://blogs.kpi.kharkov.ua/v2/nv/akademichna-dobrochesnist/>

Approval

Approved by

Head of the department
Olena PROKHORENKO

Guarantor of the educational program
Pavlo BRIN