



Syllabus Course Program



Quality management

Specialty

073 – Management

Educational program

Business Administration

Level of education

Bachelor's level

Semester

8

Institute

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

Department

Management (204)

Course type

Educational and Professional

Language of instruction

English/Ukrainian

Lecturers and course developers

**Nataliia Shmatko**

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Doctor of Economics Science, Professor, Professor of Management Department
(NTU "KhPI")

Authored and co-authored over 120 scientific publications. Courses: "Business communications", "Human resource management and organizational behavior", "Organizational behavior", "Concepts of sustainable development", "Human Resource Management"

<https://web.kpi.kharkov.ua/mto/about/staff/shmatko/>

General information

Summary

The course is aimed at acquiring knowledge and skills necessary for effective quality management, quality management system, study of quality philosophy, statistical methods of control quality of products and services, quality criteria, experience of domestic and foreign theory. All production processes employ materials, men and machines. Each of these elements has some inherent variability in addition to attributable variability, which can be controlled to an irreducible economic minimum. The subject of quality management is about reducing the variability in products and processes, quality costs and to provide maximum satisfaction to the customers through improved product performance.

Course objectives and goals

Formation and systematization of knowledge of the theoretical and practical foundations of the field of management and quality control, standardization and certification of products; the ability to use modern approaches to quality control, state and international standards ISO 9000: 2000.

Format of classes

Lectures, workshops, case study, consultations. Final control in the form of an differentiated grading.

Competencies

GC04. The ability to apply knowledge in practical situations.
GC05. Knowledge and understanding of the subject area and understanding of the professional activity.
GC06. The ability to communicate in the official language of Ukraine both orally and in writing.
GC12. The ability to generate new ideas (creativity).
SC01. The ability to identify and describe the characteristics of organizations.
SC05. The ability to manage an organization and its units through performing management functions.
SC07. The ability to choose and use modern tools of management.
SC10. The ability to assess the performed works, to ensure their quality and to motivate personnel of an organization

Learning outcomes

LO 03. To demonstrate knowledge of theories, methods and functions of management, modern concepts of leadership.
LO 05. To describe the content of the functional areas of an organization
LO 17. To conduct research individually and/or in a group under the supervision of a leader.

Student workload

The total volume of the course is 150 hours (5 ECTS credits): lectures - 20 hours, Workshops - 10 hours, self-study - 120 hours.

Course prerequisites

To successfully complete the course, you must have knowledge and practical skills in the following disciplines: "Fundamentals of Management", "Enterprise Economics", "Operational Management". "Strategic management."

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

Presentations, discussions, seminars, case-based learning, individual and team work, research work, essay writing. Study materials are available to students via OneDrive, Google class.

Program of the course

Topics of the lectures

Topic 1. Introduction- Quality Basics
Topic 2. Quality Advocates
Topic 3. Quality Improvement: Problem Solving
Topic 4. Statistical Applications in Quality Control, Variable Control Charts
Topic 5. Problem solution for Variable CC
Topic 6. Process Capability
Topic 7. Quality Control Charts for Attributes
Topic 8 Reliability
Topic 9. Acceptance Sampling and QFD
Topic 10. Design of Experiments: Taguchi Approach, Quality Costs

Topics of the workshops

Topic 1. World-class operations in a developing country
Case study.
Topic 2. Quality Improvement: Problem Solving
Apply the Gap model of quality diagnostics to the company.

Topic 3. Key quality measurements, indicators, factors

Case study.

Topic 4. Quality Control Charts for Attributes

Case study

Topic 5. Quality Function Deployment

Case study

Topics of the laboratory classes

Laboratory work within the discipline is not provided.

Self-study

The course involves the implementation of a reports and presentation for this reports. Students are also recommended additional materials (videos, articles) for independent study and analysis.

Course materials and recommended reading

QUALITY, 5th edition, Donna C.S. Summers; Pearson Education, Prentice Hall, 2010.

MANAGING, CONTROLLING, AND IMPROVING QUALITY, Douglas C. Montgomery, Cheryl L. Jennings, Michele E. Pfund; 2011, John Wiley & Sons Wiley, Inc.

Shapoval M.I. Quality management: textbook/ M.I. Shapoval - 3rd edition. ex.. and add. K.: Knowledge, KOO, 2007.

Kyrychenko L.S., Merezhko N.V. Basics of standardization, metrology and quality management - K: KNTEU, 2001

JURAN'S QUALITY HANDBOOK: THE COMPLETE GUIDE TO PERFORMANCE EXCELLENCE, 6th edition, Joseph M. Juran, Joseph A. De Feo; New York: McGraw Hill, c2010.

ACCEPTANCE SAMPLING IN QUALITY CONTROL 2nd ed., Edward G. Schilling, Dean V. Neubauer; Boca Raton, CRC Press, 2009.

QUALITY MANAGEMENT, Howard S. Gitlow, Alan J. Oppenheim, Rosa Oppenheim, and David M. Levine, Third Edition, McGraw-Hill International Edition, 2005.

THE MANAGEMENT AND CONTROL OF QUALITY, Seventh Edition, James EVANS and William M. LINDSAY, Thomson South Western, 2008

Assessment and grading

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

Differentiated grading: multiple choice questions.

Current assessment: 2 quizzes and a case study (20% each).

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

Date, signature

Head of the department
Olena Prokhorenko

Date, signature

**Guarantor of the educational
program**
Olena Prokhorenko