



GDYNIA MARITIME UNIVERSITY
Faculty of Management and Quality Science



Course: Quality Management					Status: optional			
Semester	No. of weeks	No. of hours (weekly)			No. of hours (globally)			ECTS
		Lect.	Class	Lab.	Lect.	Class	Lab.	
	8	15	15				4	
Lecturers: Natalia Żak, PhD								

Contents of Study

1. INTRODUCTION TO QUALITY MANAGEMENT

- a. Quality – definition and evolution of the concept
- b. Importance of quality in modern organizations
- c. Quality management principles
- d. Quality culture and customer focus
- e. Quality costs and their significance
- f. Historical development of quality management

2. QUALITY MANAGEMENT SYSTEMS

- a. Quality Management Systems (QMS)
- b. ISO 9001 requirements and structure
- c. Process approach in quality management
- d. Risk-based thinking in QMS
- e. Documentation and records management
- f. Audits and management review

3. QUALITY TOOLS AND TECHNIQUES

- a. Basic quality tools (7 QC Tools)
- b. Cause-and-effect analysis
- c. Pareto analysis
- d. Statistical Process Control (SPC)
- e. Control charts and process capability
- f. Problem-solving methodologies

4. CONTINUOUS IMPROVEMENT

- a. Continuous improvement concepts
- b. PDCA cycle
- c. Kaizen philosophy
- d. Lean Management principles

- e. Six Sigma methodology
- f. Corrective and preventive actions

5. QUALITY ASSURANCE AND QUALITY CONTROL

- a. Quality Assurance (QA) versus Quality Control (QC)
- b. Inspection and testing methods
- c. Measurement systems and calibration
- d. Supplier quality management
- e. Nonconformity management
- f. Customer satisfaction measurement

6. QUALITY MANAGEMENT IN PRACTICE

- a. Integrated Management Systems
- b. Quality management in manufacturing and services
- c. Sustainability and quality management
- d. Digitalization and Industry 4.0 in quality management
- e. Case studies in quality improvement
- f. Future trends in quality management

Criteria for assessment:

Lectures: chosen topic presentation by the student (50%)

Class: zaliczenie zadań praktycznych wykonywanych podczas ćwiczeń, obejmujących zastosowanie narzędzi i metod zarządzania jakością (50%)

Literature:

1. Evans, J. R., & Lindsay, W. M. (2020). *Managing for Quality and Performance Excellence* (12th ed.). Cengage Learning.
2. Goetsch, D. L., & Davis, S. B. (2022). *Quality Management for Organizational Excellence: Introduction to Total Quality* (9th ed.). Pearson.
3. Oakland, J. S. (2014). *Total Quality Management and Operational Excellence: Text with Cases* (4th ed.). Routledge.
4. Hoyle, D. (2017). *ISO 9001:2015 Quality Management Systems Handbook* (7th ed.). Routledge.
5. Montgomery, D. C. (2020). *Introduction to Statistical Quality Control* (8th ed.). Wiley.
- Pyzdek, T., & Keller, P. A. (2018). *The Six Sigma Handbook* (5th ed.). McGraw-Hill Education.
6. Juran, J. M., & De Feo, J. A. (2017). *Juran's Quality Handbook: The Complete Guide to Performance Excellence* (7th ed.). McGraw-Hill Education.
7. Besterfield, D. H. (2013). *Quality Control* (9th ed.). Pearson.
8. Tague, N. R. (2005). *The Quality Toolbox* (2nd ed.). ASQ Quality Press.
9. ISO. (2015). *ISO 9001:2015 Quality Management Systems – Requirements*. International Organization for Standardization.