



SUBJECT DATASHEET

Quality Management Methods

BMEGT20MN57

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name

Quality Management Methods

ID (subject code)

BMEGT20MN57

Type of subject

contact lessons

Course types and lessons

<i>Type</i>	<i>Lessons</i>
Lecture	2
Practice	0
Laboratory	0

Type of assessment

term grade

Number of credits

3

Subject Coordinator

<i>Name</i>	<i>Position</i>	<i>Contact details</i>
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Dr. Surman Vivien	assistant professor	surman.vivien@gtk.bme.hu
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Educational organisational unit for the subject

Department of Management and Business Economics

Subject website

<https://edu.gtk.bme.hu>

Language of the subject

magyar - HU, English - EN

Curricular role of the subject, recommended number of terms

Programme: **MSc in Engineering Management**

Subject Role: **Compulsory elective**

Recommended semester: **2**

Programme: **MSc in Management and Leadership**

Subject Role: **Compulsory elective**

Recommended semester: **2**

Direct prerequisites

Strong nincs

Weak nincs

Parallel nincs

Exclusion nincs

Validity of the Subject Description

Approved by the Faculty Board of Faculty of Economic and Social Sciences, Decree No: 580884/8/2023 registration number. Valid from: 29.11.2023.

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

The course's primary objective is to get students acquainted with the most important methods and analysis techniques used for the effective operation of quality systems and quality control of production/service processes. The secondary objective of the course is for the students to acquire sufficient proficiency in practical application in addition to the theoretical foundations.

Academic results

Knowledge

1. Students know the generally used concepts of quality management and reliability.
2. Students have an overview of quality tools that can be used during process control and development.
3. Students have confident methodological knowledge of the application of the tools. They understand and see the combination possibilities of the methodologies.

Skills

1. Students are able to apply the learned theoretical and methodological knowledge in practice.
2. Students are able to doubt, think about alternatives, and integrate knowledge.
3. Students will be able to professionally participate in solving quality management problems, preparing and/or making such decisions.

Attitude

1. Students will strive for cooperation in multidisciplinary teamwork.
2. Students will select and use the quality management techniques that offer the greatest chance to understand and improve the process.
3. Students use a systematic approach in their thinking.

Independence and responsibility

1. Students are suitable for independent work (methodology, technique selection; work organization, planning, management; data collection, systematization, analysis, evaluation; general and professional development).

Teaching methodology

Lectures, optional practical tasks for independent or groupwork.

Materials supporting learning

- Oktatási segédanyagok / Educational materials (<https://edu.gtk.bme.hu>)
- Erdei J. Minőségmenedzsment módszerek, oktatási segédanyag, BME GTK, 2018
- Kemény S.: Statisztikai minőség- (megfelelőség-) szabályozás, Műszaki Könyvkiadó - Magyar Minőség Társaság, Budapest, 1999

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

Evaluation of the learning outcomes stated in point 2.2: The subject ends with a midterm mark.

Performance assessment methods

A. Detailed description of assessments during the term: Solving assigned tasks in practical lessons, with which max. 100 points can be obtained. From the max. 100 points only max. 70 points can be added to the final grade. The lecturers can evaluate active participation in lectures during the semester with extra points, which is added to the final grade. Maximum 20 plus points for one student can be taken into account. The requirement of the subject is to reach at least min. 50% at the midterm, and also to collect min. 50 points with the midterm, the active participation and the practical tasks together.

Percentage of performance assessments, conducted during the study period, within the rating

- solving tasks in classes: 70
- active participation: 20
- midterm: 30
- total: 100

Percentage of exam elements within the rating

Conditions for obtaining a signature, validity of the signature

Issuing grades

Excellent	95
Very good	88-94
Good	76-87
Satisfactory	64-75
Pass	50-63
Fail	0-49

Retake and late completion

Active participation and practical tasks - due to their nature - cannot be replaced or corrected in any other way. The midterm at the end of the semester can be retaken and corrected in accordance with the regulations of the Code of Studies

Coursework required for the completion of the subject

participation in contact lessons	28
preparation for the lectures	14
fulfilling practical tasks	14
preparation for the midterm	34
total	90

Approval and validity of subject requirements

Consulted with the Faculty Student Representative Committee, approved by the Vice Dean for Education, valid from: 06.11.2023.

III. COURSE CURRICULUM

THEMATIC UNITS AND FURTHER DETAILS

Topics covered during the term

The subject consists of the following thematic blocks to achieve the learning outcomes set out in point 2.2. Each semester the syllabus schedules these topics according to the calendar and other conditions.

- 1 Quality management methods: basic concepts, processes
- 2 Statistical process control methods
- 3 Failure analysis methods
- 4 Idea-gathering and problem-solving methods
- 5 Methods for describing and modeling processes
- 6 Other quality management methods

Additional lecturers

Dr. Benedek Petra egyetemi adjunktus benedek.petra@gtk.bme.hu

Erdei János mesteroktató erdei.janos@gtk.bme.hu

Approval and validity of subject requirements