

# SUBJECT DATASHEET

**Quality Management Methods** 

BMEGT20MN57

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## I. SUBJECT DESCRIPTION

## 1. SUBJECT DATA

## Subject name

Quality Management Methods

ID (subject code) BMEGT20MN57

Type of subject

contate lessons

<u>Course types and lessons</u>		Type of
Type	Lessons	<u>assessment</u>
Lecture	2	term grade
Practice	0	Number of
Laboratory	0	<u>credits</u> 3

## **Subject Coordinator**

Name Position Contact details

Dr. Surman Vivien assistant professor surman.vivien@gtk.bme.hu

## 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.

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## 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: 70active 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
fulfillinf 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.

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## 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

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