



**SUBJECT DATASHEET**

**RESEARCH METHODOLOGY**

**BMEGT41A004**

# I. SUBJECT DESCRIPTION

## 1. SUBJECT DATA

### Subject name

RESEARCH METHODOLOGY

### ID (subject code)

BMEGT41A004

### Type of subject

contact lessons

### Course types and lessons

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

### Type of

### assessment

seminar grade

### Number of

### credits

3

### Subject Coordinator

| <i>Name</i>      | <i>Position</i>     | <i>Contact details</i>  |
|------------------|---------------------|-------------------------|
| Dr. Héder Mihály | assistant professor | heder.mihaly@gtk.bme.hu |

### Educational organisational unit for the subject

Department of Philosophy and History of Science

### Subject website

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

### Language of the subject

magyar - HU és angol - ENG

### Curricular role of the subject, recommended number of terms

### Direct prerequisites

*Strong* None

*Weak* None

*Parallel* None

**Exclusion** nem vehető fel a tantárgy, ha korábban teljesítette az alábbi tantárgyak vagy tantárgycsoportok bármelyikét Kutatásmódszertan (BMEGT41A002), Kutatásmódszertan (BMEGT41A004), Kutatásmódszertan (BMEGT41A015) és Kutatásmódszertan (BMEGT41A004) The subject cannot be taken if the student previously completed any of the following subjects: Research Methodology (BMEGT41A002), Research Methodology (BMEGT41A004), Research Methodology (BMEGT41A015), Research Methodology(BMEGT41A004)

### Validity of the Subject Description

Approved by the Faculty Board of Faculty of Economic and Social Sciences, valid from 29 April 2020.

## 2. OBJECTIVES AND LEARNING OUTCOMES

### Objectives

The aim of the course is to develop a critical approach in students to their knowledge, whether it is the result of their own conclusions or the communication of others. Students learn about the ways of thinking of different faculties and the peculiarities of their own field with the help of theories that determine the development of science and easy-to-understand examples. The acquired knowledge is crucial during the research and R&D career, but it is also very useful in professional and private life.

### Academic results

#### Knowledge

1. Knows the knowledge-generating and problem-solving methods of the main theories of her field.
2. Possesses confident methodological knowledge, understands the possibilities and perspectives of methodological innovation.
3. Knows the broader system of her field, recognizes the relationships with related disciplines, uses the opportunities provided by the wider system and the contexts related to the system.
4. Knows the connections between science, education, society and the media, the different manifestations of this relationship and their consequences.
5. Possesses adequate and sufficient knowledge to orient herself in the various mechanisms of social decision-making.
6. Knows all the important elements of the concepts of social sciences, understands the connections that form the basis of the scientific understanding of society and social communication.
7. Knows the general and specific natural scientific, engineering scientific, management and organizational scientific principles, rules, connections, procedures necessary for the engineering field.

#### Skills

1. Confidently uses the vocabulary and the basic scientific concepts of the profession, and the elements of the special vocabulary based on them.
2. Possesses the ability to gain a new perspective, she is able to approach science and its environment with an interdisciplinary approach.
3. In solving her professional tasks, she is able to independently analyze, evaluate, and synthesize conclusions and explanations.
4. She is able to apply a wide range of well-established techniques for the critical analysis and processing of information.
5. She is able to participate in the process of lifelong learning.
6. Plans and organizes her own independent learning, using the widest range of available resources.
7. Identifies special professional problems with an interdisciplinary approach, explores and articulates the detailed theoretical and practical background needed to solve them.
8. In the course of working, she co-operates with representatives of related fields.
9. Building on his basic theoretical background, she is able to develop a working hypothesis based on the examination of facts, exploring the real connections of the processes taking place in the fields of social communication, the most suitable empirical method for its examination and the concept of the process. 1
10. She is able to review the relevant literature.

#### Attitude

1. She is open to all forms of professional innovation, inclusive but not uncritical to theoretical, practical and methodological innovations. She is critical of approaches that seek to limit the openness and diversity of the social sciences in scientific, practical, legal, or political communication scenes.
2. She is confident in her own knowledge and skills, committed to professional ideas.
3. Open to critical self-reflection, various forms of professional development, self-improvement methods of intellectual worldview and strives for self-development in these areas.
4. Seek to solve problems as much as possible in collaboration with others.
5. Possesses a problem-centric perspective and problem-solving thinking.

#### Independence and responsibility

1. In her own professional environment, she develops a historically and politically coherent individual position, which helps the development of herself and her environment.
2. She is independent, constructive and assertive in forms of cooperation inside and outside the institution.
3. In her organizational and institutional activities, she responsibly uses her knowledge and influence to quality work and its recognition.
4. Consciously represents the methods of her own profession and accepts the different methodological peculiarities of other disciplines.
5. Even in unexpected decision-making situations, she independently considers and develops comprehensive professional questions based on specific sources.
6. Based on professional guidance, she considers and develops comprehensive and specific professional issues based on specific sources.
7. Carries out her work independently with a critical evaluation and continuous correction of her activity.
8. Participates responsibly in the development and justification of her professional views.
9. Considers and develops comprehensive and specific professional issues with significant independence and develops them on the basis of specific resources. 1
10. Plans and carries out her activities autonomously. 1

11. Consciously reflects on her own historical and cultural embeddedness.

**Teaching methodology**

Lectures, oral and written communication, independently prepared tasks.

**Materials supporting learning**

- Gulyás et al.: Bevezetés a tudományfilozófiába
- Héder Mihály. Modellezés és szimuláció a tudományban.
- Francis Bacon: Novum Organum. I-től XLIV-ig
- Clifford Geertz: Mély játék: Jegyzetek a bali kakasviadalról.

## II. SUBJECT REQUIREMENTS

### TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

#### General Rules

Assessment of learning outcomes described under section 2.2: three written exams, one home assignment.

#### Performance assessment methods

1. General knowledge assessment: Complex, written way of evaluating the competence elements of the subject and knowledge, type in the form of a test. The test focuses on knowledge elements, interpretive tasks, and inferential tasks in the form of written question answers. Working time is 30-60 minutes depending on the material. In each cumulative assessment, at least 50% of the points to be obtained must be achieved in order to complete the subject. 2. Partial performance evaluation (homework): complex way of assessing the knowledge, ability, attitude, and autonomy and responsibility elements of the subject. The essay can be used to earn extra points, which are included in the summary performance evaluation related to the subject. The number of extra points is determined by the instructor based on the topic and difficulty of the essay.

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

- General knowledge assessment (test): 50%
- General knowledge assessment (test): 50%
- General knowledge assessment (test): 0%
- Partial performance evaluation (homework): 0%
- total: 100%+

#### Percentage of exam elements within the rating

#### Conditions for obtaining a signature, validity of the signature

#### Issuing grades

|              |         |
|--------------|---------|
| Excellent    | 90      |
| Very good    | 85–90   |
| Good         | 72,5–85 |
| Satisfactory | 65–72,5 |
| Pass         | 50–65   |
| Fail         | 49      |

#### Retake and late completion

In the replacement period, two general knowledge assessments can be replaced or improved - at the first time free of charge. In case of correction, the more favorable result is taken into account.

#### Coursework required for the completion of the subject

|  |                |
|--|----------------|
| participation in contact hours                 | 14×2=28        |
| preparation for contact hours                  | 0              |
| preparation for partial performance evaluation | 2×20=40        |
| home works                                     | 0 (opcionális) |
| self-study of designated written material      | 22             |
| preparation for exam                           | 0              |
| total  | 90             |

#### Approval and validity of subject requirements

Consulted with the Faculty of Student Representative Committee, approved by Emma Lógó, Phd, Vice Dean for Education. Date: .... Valid from September 1, 2017.

# III. COURSE CURRICULUM

## THEMATIC UNITS AND FURTHER DETAILS

### Topics covered during the term

To achieve the learning outcomes described under section 2.2, the course will include the following topics.

### Additional lecturers

|                                |                                      |
|--------------------------------|--------------------------------------|
| Bárdos Dániel                  | . bardos.daniel@filozofia.bme.hu     |
| Dr. Bíró Gábor István          | . biro.gabor.istvan@filozofia.bme.hu |
| Dr. Danka István               | . danka.istvan@filozofia.bme.hu      |
| Horváth-Czingerné Lehofer Anna | . lehofer.anna@filozofia.bme.hu      |
| Gyarmathy Ákos                 | . gyarmathy@filozofia.bme.hu         |
| Karakas Alexandra              | . karakas.alexandra@filozofia.bme.hu |

### Approval and validity of subject requirements

Part I-III of the Subject Form is to be approved by the Head of Department of Philosophy and History of Science named under