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

Type	*Lessons*
Lecture	2
Practice	0
Laboratory	0

Type of assessment
seminar grade

Number of credits
3

Subject Coordinator

Name	*Position*	*Contact details*
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
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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