# SUBJECT DATASHEET

## History of Science

## BMEGT41M300

# I. SUBJECT DESCRIPTION

## 1. SUBJECT DATA

**Subject name**
History of Science

**ID (subject code)** BMEGT41M300

**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. Bíró Gábor István | assistant professor | biro.gabor@gtk.bme.hu |

**Educational organisational unit for the subject**
Department of Philosophy and History of Science

**Subject website**
https://www.filozofia.bme.hu/targyak

**Language of the subject**
magyar - HU; angol - EN

**Curricular role of the subject, recommended number of terms**
Programme: **MSc in Engineering Management**
Subject Role: **Elective**
Recommended semester: **2**

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**Direct prerequisites**

| | |
|---|---|
| ***Strong*** | None |
| ***Weak*** | None |
| ***Parallel*** | None |
| ***Exclusion*** | None |

**Validity of the Subject Description**
Approved by the Faculty Board of Faculty of Economic and Social Sciences, Decree No: 580768/11/2022. Valid from: 26.10.2022.

# 2. OBJECTIVES AND LEARNING OUTCOMES

**Objectives**

The aim of the course is to develop a comprehensive picture of the fundamental changes and approaches of science and philosophy, the nature and significance of science and philosophy.

**Academic results**

Knowledge

1. 1. Knows the basics and methodology of the history of science.
2. 2. Knows the connections between science, education, society and the media, the different manifestations of this relationship and their consequences.
3. 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. 4. Possesses adequate and sufficient knowledge to orient herself in the various mechanisms of social decision-making.

Skills

1. 1. Confidently uses the vocabulary and the basic scientific concepts of the profession, and the elements of the special vocabulary based on them.
2. 2. Possesses the ability to gain a new perspective, she is able to approach science and its environment with an interdisciplinary approach.
3. 3. In solving her professional tasks, she is able to independently analyze, evaluate, and synthesize conclusions and explanations.
4. 4. She is able to apply a wide range of well-established techniques for the critical analysis and processing of information.
5. 5. She is able to participate in the process of lifelong learning.
6. 6. Identifies special professional problems with an interdisciplinary approach, explores and articulates the detailed theoretical and practical background needed to solve them.
7. 7. Using the learned theories and methods, she explores, systematizes and analyzes facts and basic connections, formulates independent conclusions, critical remarks, and decision-making proposals, and makes decisions in routine and partly unknown - domestic and international - environments.

Attitude

1. 1. Accepts and consistently embraces the diversity of social scientific thinking and credibly represents its conceptual foundations in her narrower and wider environment.
2. 2. Open to critical self-reflection, various forms of professional development, self-improvement methods of intellectual worldview and strives for self-development in these areas.
3. 3. Possesses a problem-centric perspective and problem-solving thinking.

Independence and responsibility

1. 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. 2. She is independent, constructive and assertive in forms of cooperation inside and outside the institution.
3. 3. Carries out her work independently with a critical evaluation and continuous correction of her activity.
4. 4. Participates responsibly in the development and justification of her professional views.
5. 5. Responsible for her analyzes, conclusions and decisions.

**Teaching methodology**

lectures

**Materials supporting learning**

- Tankönyvek / Textbooks
- A tárgyhoz kapcsolódó jegyzet és a bemutatott slide-ok letölthetőek a tantárgy hivatalos elektronikus felületéről / Lecture notes and PPT-slides available on Moodle.
- Dear, Peter. 2019. Revolutionizing The Sciences, 3rd edition, Red Globe Press.
- Grant, Esward. 1996. THE FOUNDATIONS OF MODERN SCIENCE IN THE MIDDLE AGES: THEIR RELIGIOUS, INSTITUTIONAL AND INTELLECTUAL CONTEXTS, CAMBRIDGE UNIVERSITY PRESS: CAMBRIDGE.
- Lindberg, David C. 1992. The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious and Institutional Context, 600. B.C. to A.D. 1450, University of Chicago Press: Chicago.

# II. SUBJECT REQUIREMENTS

## TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

**General Rules**

The assessment of the learning outcomes (enlisted in point 2.2) are done through two midterm exams, one written assignment (homework)
and (optional) through active participation in class.

**Performance assessment methods**

1. Summative learning assessment: two midterms during the semester or during the exam period. 2. Written assigntment (homework): writing
an essay about a topic previously discussed with and approved by the lecturer. The essay should be in Times New Roman, font size 12, with line spacing 1,5 and should be 3-5 pages in length.

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

- **obligatory**: 33
- **obligatory**: 33
- **obligatory**: 34

**Percentage of exam elements within the rating**

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

One from the two midterms plus the written assignment (homework) should be completed (with at least satisfactory mark) during the semester
in order to be able to earn a signature.

**Issuing grades**

| | |
|---|---|
| Excellent | 90 |
| Very good | 81-90 |
| Good | 71-80 |
| Satisfactory | 61-70 |
| Pass | 51-60 |
| Fail | 0-50 |

**Retake and late completion**

One midterm can be (re)done on the retake week, before the exam period.

**Coursework required for the completion of the subject**

| | |
|---|---|
| classwork | 28 |
| learning for the midterms | 32 |
| homework | 30 |

**Approval and validity of subject requirements**

Consulted with the Faculty Student Representative Committee, approved by the Vice Dean for Education, valid from: 10.10.2022.

# III. COURSE CURRICULUM

## THEMATIC UNITS AND FURTHER DETAILS

**Topics covered during the term**

A 2.2. pontban megfogalmazott tanulási eredmények eléréséhez a tantárgy a következő tematikai blokkokból áll. Az egyes félévekben meghirdetett kurzusok sillabuszaiban e témaelemeket ütemezzük a naptári és egyéb adottságok szerint.

**Additional lecturers**

Dr. Paksi Dániel egyetemi adjunktus paksi.daniel@gtk.bme.hu

**Approval and validity of subject requirements**