

## I. Subject Specification

### 1. Basic Data

#### 1.1 Title

Railway Operation

#### 1.2 Code

BMEEOUVMU62

#### 1.3 Type

Module with associated contact hours

#### 1.4 Contact hours

Type	Hours/week / (days)
Lecture	2

#### 1.5 Evaluation

Midterm grade

#### 1.6 Credits

2

#### 1.7 Coordinator

name	Bánfi Miklós Gábor
academic rank	Research assistant
email	<a href="mailto:banfi.miklos@kjk.bme.hu">banfi.miklos@kjk.bme.hu</a>

#### 1.8 Department

Department of Highway and Railway Engineering

#### 1.9 Website

<https://epito.bme.hu/BMEEOUVMU62>

<https://fiek2.mywire.org/course/view.php?id=3499>

#### 1.10 Language of instruction

english

## 1.11 Curriculum requirements

Recommended elective in the Specialization in Highway and Railway Engineering (MSc) programme

## 1.12 Prerequisites

## 1.13 Effective date

1 September 2022

## 2. Objectives and learning outcomes

### 2.1 Objectives

Process of planning transport establishment using methodological guides. Structure and Chapters of Feasibility Study and Preliminary Feasibility Study. Fit to the policy, evaluation of projects. Development of project variants, evaluation of variables and variations. Planning principles for bus stations, railway stations, airports. The concept of intermodality, the design and function of intermodal nodes. Establishing transfer links. Principles and aspects of universal design.

### 2.2 Learning outcomes

Upon successful completion of this subject, the student:

#### A. Knowledge

1. The student knows and understands the characteristics, fields of application and planning techniques of each transport subsector.

#### B. Skills

1. Ability to dealing with creative problems in the field of transport and flexible solutions to complex tasks
2. Able to plan an intermodal node, taking into account their operational aspects.
3. Able to work in a group, sharing tasks and managing them over time.

#### C. Attitudes

1. Engages in professional and ethical values related to the technical field and works based on a system-oriented and process-oriented mindset, in a team-work

#### D. Autonomy and Responsibility

1. Make his decisions carefully, in consultation with representatives of other fields of expertise, with full responsibility. In the case of teamwork, he also works with a well-defined responsibility.

### 2.3 Methods

Presentations about theoretical and practical issues, calculations.

## 2.4 Course outline

Week	Topics of lectures and/or exercise classes
1.	Schedule, requirements
2.	Method of transport data recording. Cross-section transport data recording
3.	Organization of Autobus transport
4.	<a href="#">Urban transport 1</a>
5.	<a href="#">Urban transport 2</a>
6.	Railway traffic 1
7.	Summary of the first part of the semester
8.	Railway traffic 2
9.	Traffic network planning 1
10.	Traffic network planning 2
11.	Public transport prioritization
12.	Intermodality & <a href="#">Interoperability 1</a>
13.	Intermodality & <a href="#">Interoperability 2</a>
14.	Summary of the second part of the semester

The above programme is tentative and subject to changes due to calendar variations and other reasons specific to the actual semester. Consult the effective detailed course schedule of the course on the subject website.

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## 2.5 Study materials

### a) Online materials

1. Electronic aiding material (Presentations)
2. Scientific articles presented on lectures

## 2.6 Other information

- 1) Attendance to lectures is compulsory. The credits from the subject will be refused to students attending less than 75% of the classes.
- 2) Students are evaluated based on their actual individual performance. Students are required to show evidence of their own knowledge and skills. Submitting a work of others, obtaining or giving unauthorized help (e.g. during an exam or test) cheating and plagiarism in any form is unacceptable. Whoever violate the respective Regulations of the University will be given a failing grade (1), without the possibility of retake and repeat, and will be reported to the Dean's Office.

## 2.7 Consultation

The instructors are available for consultation during their office hours, as advertised on the department website. Special appointments can be requested via e-mail: [banfi.miklos@kjk.bme.hu](mailto:banfi.miklos@kjk.bme.hu)

# **Railway Operation - BMEEOUVMU62**

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This Subject Datasheet is valid for:

2023/2024 semester I

**II. Subject requirements**

Assessment and evaluation of the learning outcomes

## 3.1 General rules

The assessment of the learning outcomes specified in clause 3.2. above and the evaluation of student performance occurs via tests.

## 3.2 Assessment methods

<b>Evaluation form</b>	<b>Abbrev.</b>	<b>Assessed learning outcomes</b>
midterm test 1	ZH1	A.1; B.1-B.3
midterm test 2	ZH2	A.1; B.1-B.3
attendance and activity	A	A.1; B.1-B.3; C.1; D.1

The dates of midterm tests can be found in the detailed course schedule on the subject's website.

The dates of deadlines of assignments/homework can be found in the detailed course schedule on the subject's website.

## 3.3 Evaluation system

<b>Abbreviation</b>	<b>Score</b>
ZH1	50%
ZH2	50%
<b>Sum</b>	<b>100 %</b>

Student must reach 50% of the points for a successful test.

## 3.4 Requirements and validity of signature

Not available / not relevant.

## 3.5 Grading system

<b>Grade</b>	<b>Points (P)</b>
excellent (5)	$87,5\% \leq P$
good (4)	$75 \leq P < 87,5\%$
satisfactory (3)	$62,5 \leq P < 75\%$
passed (2)	$50 \leq P < 62,5\%$
failed (1)	$P < 50\%$

## 3.6 Retake and repeat

Unsuccessful test can be replaced during the replacement period

## 3.7 Estimated workload

<b>Activity</b>	<b>Hours/semester</b>
contact hours	$14 \times 2 = 28$
preparation for the courses	$14 \times 1 = 14$
preparation for the tests	$2 \times 4 = 8$
home studying of the written material	10
<b>Sum</b>	<b>60</b>

3.8 Effective date

1 September 2022

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