1. Subject name	**Planning of Transport Databases (PhD)**				
2. Subject name in Hungarian	Közlekedési adatbázisok tervezése (PhD)				
3. Code	**BMEKOKUD004**	4. Evaluation type	exam grade	5. Credits	2
6. Weekly contact hours	**0 (0) Lecture**	**2 (0) Practice**		**0 (0) Lab**	
7. Curriculum	**PhD Programme**	8. Role	**Specific course**		

9. Working hours for fulfilling the requirements of the subject					**60**
Contact hours	28	Preparation for seminars	0	Homework	20
Reading written materials	8	Midterm preparation	0	Exam preparation	4

10. Department	**Department of Transport Technology and Economics**
11. Responsible lecturer	Dr. Juhász János
12. Lecturers	Dr. Juhász János
13. Prerequisites	

14. Description of lectures

The aim of the course is to learn how to capture, store, collect and analyse traffic-related data, to get to know, choose and apply the most common methods:

- Methods of collecting and storing traffic data. Sources of error.
- Questionnaire data collection forms, ways of storing and processing data, transport applications.
- Description of data model types, presentation of their usage possibilities.
- Structure, characteristics and comparison of OLAP, MOLAP, ROLAP, OLTP systems.
- Big Data's theoretical background, overview of transport examples.
- Characteristics and methods of analysis of GIS databases. Traffic location identification systems.
- The system of registration, construction, information content of road accidents involved injured persons.

15. Description of practices

Exercising theoretical knowledge with examples and case studies.

16. Description of labortory practices

17. Learning outcomes

A. Knowledge
- Knows the methods of collecting traffic data.
- Knows the different data model types.
- Knows the structure, characteristics and peculiarities of OLAP, MOLAP, ROLAP, and OLTP systems.
- Knows the Big Data's theoretical background.
- Knows the structure and main characteristics of GIS systems.
- Knows the structure of the road accident database.

B. Skills
- Able to design and execute data collection.
- Able to design and build a data storage structure.
- Able to select the most suitable data model type for the purpose.
- Able to design and prepare a geospatial database, to map data, to create spatial queries.
- Able to retrieve information from a personal road accident database.

C. Attitudes
- The student attends the lectures, prepare independent study on time.
- During the lectures, he is actively involved in processing the current topic.
- During the independent study the student strives to develop new technical solutions.
- Interested in international and domestic developments in the field.
- Open to learn new knowledge and learn.

D. Autonomy and Responsibility

- Apply responsibility the knowledge acquired in the course of the course.
- Can independently develop new technical solutions.
- Accepts the framework of collaboration, can perform its work independently or as part of a team, depending on the task.

18. Requirements, way to determine a grade (obtain a signature)

Exam. Evaluation of individual study.

19. Opportunity for repeat/retake and delayed completion

Retake exam. Study repair

20. Learning materials

Supported by downloadable documents from the Department website

| **Effective date** | 27 November 2019 | **This Subject Datasheet is valid for** | 2023/2024 semester II |