

Faculty of Transportation Engineering and Vehicle Engineer

## 1. Subject name **Transport Logistics** Szállítási logisztika 2. Subject name in Hungarian **BMEKOALD006** 3 3. Code 4. Evaluation type exam grade 5. Credits 6. Weekly contact 3 (0) Lecture 0 (0) Practice 0 (0) Lab hours 7. Curriculum **PhD Programme** 8. Role Specific course 9. Working hours for fulfilling the requirements of the subject 90 **Contact hours** 7 30 42 **Preparation for Homework** seminars 0 **Reading written** 11 **Midterm** Exam preparation 0 materials preparation **10. Department Department of Material Handling and Logistics Systems 11. Responsible** Dr. Kovács Gábor lecturer **12. Lecturers** Dr. Kovács Gábor 13. Prerequisites recommended: BMEKOALD005 - Packaging Technologies 14. Description of lectures Modern methods and optimization problems of goods transportation. The vehicle routing problem and traveling salesman

Modern methods and optimization problems of goods transportation. The vehicle routing problem and traveling salesman problem (selected notes). Solving methods: analytic, heuristic, metaheuristics algorithms. The ant colony and genetic algorithm for solving TSP and VRP tasks. The transportation network structure optimization, decision supporting.

**15. Description of practices** 

## 16. Description of labortory practices

## 17. Learning outcomes

A. Knowledge

- Knowledge of the modular structure and operation of the transport logistics systems.
- Knowledge of related optimum search tasks and solutions.
- B. Skills
  - Able to study the transport logistics systems, taking into account the scientific requirements.
  - Able to carry out research and development tasks related to the transport logistics systems.

C. Attitudes

- Strive to maximize their abilities to make their studies at the highest possible level, with a profound and independent knowledge, accurate and error-free, in compliance with the rules of the applicable tools, in collaboration with the instructors.
- D. Autonomy and Responsibility
  - Take responsibility for the quality of the work and the ethical standards that set an example for the classmates, using the knowledge acquired during the course.

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

The grade of the PhD student is based on the semester activity and the evaluation of the paper (publishing), in consultation with the supervisor.

19. Opportunity for repeat/retake and delayed completion

Announced at the beginning of the semester

20. Learning materials

Slides and examples in electronic format

Effective date 27 November 2019 This Subject Datasheet is valid for 2024/2025 semester II