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| 1. Subject name | **Information connection of the vehicle and the track** | | | | |
| 2. Subject name in Hungarian | Jármű-pálya információs kapcsolata | | | | |
| 3. Code | **BMEKOKAM232** | 4. Evaluation type | **mid-term grade** | 5. Credits | **3** |
| 6. Weekly contact hours | **2 (7) Lecture** | **0 (0) Practice** | **0 (0) Lab** | | |
| 7. Curriculum | **Transportation Engineering MSc (K)** | 8. Role | **Specialization (sp) at Transportation Engineering MSc (K)** | | |
| 9. Working hours for fulfilling the requirements of the subject | | | | | **90** |
| Contact hours | 28 | Preparation for seminars | 4 | Homework | 24 |
| Reading written materials | 22 | Midterm preparation | 12 | Exam preparation | 0 |
| 10. Department | **Department of Control for Transportation and Vehicle Systems** | | | | |
| 11. Responsible lecturer | Dr. Szabó Géza | | | | |
| 12. Lecturers | Dr. Szabó Géza | | | | |
| 13. Prerequisites | | | | | |

## 14. Description of lectures

The course provides an overview of the procedures and methods of information transfer between the vehicle and the track in different transport sectors. In addition, it presents technologies and traffic management methods developed based on information transfer. The course focuses on the needs assessment, specification and selection of appropriate technology for communications in transport systems.
Topics: Specifics of communications; general communication techniques. Wired and broadcast transmissions; characteristics of broadcast transmissions. Steps to specify communication needs; the conditions for fulfilling the specification; choice of available technologies for communication.

## 15. Description of practices

## 16. Description of labortory practices

## 17. Learning outcomes

A. Knowledge
- understand and can apply communication techniques; has knowledge of communication theory related to transport and vehicle engineering.

B. Skills
- able to analyze or specify communication sub-systems in the field of transport and vehicle.

C. Attitudes
- to participate in solving communication problems in the field of transport or vehicle, to work efficiently and willingly with specialists of other fields (in particular: electrical engineering).

D. Autonomy and Responsibility
- he/she is aware of and treats the responsibility associated with the task solution during transport system communication analysis and specification.

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

Two midterm tests and a small project task. The final result based on the average of the tests. For the final mark the small project task shall be accepted.

## 19. Opportunity for repeat/retake and delayed completion

One test can be retried and the small project task can be delayed submitted at the end of the semester

## 20. Learning materials

Lecture Notes

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| **Effective date** | 10 October 2019 | **This Subject Datasheet is valid for** | Inactive courses |