Budapest University of Technology and Economics
Faculty of Transportation Engineering and Vehicle Enginee

1. Subject name	**Vehicle superstructure design**				
2. Subject name in Hungarian	Járműfelépítmény tervezés				
3. Code	**BMEKOJSM667**	**4. Evaluation type**	**mid-term grade**	**5. Credits**	**5**
6. Weekly contact hours	**2 (10) Lecture**	**0 (0) Practice**	**2 (11) Lab**		
7. Curriculum	**Vehicle Engineering MSc (J)**	**8. Role**	**Specialization (sp) at Vehicle Engineering MSc (J)**		
9. Working hours for fulfilling the requirements of the subject					**150**
Contact hours	56	**Preparation for seminars**	18	**Homework**	50
Reading written materials	12	**Midterm preparation**	4	**Exam preparation**	10
10. Department	**Department of Railway Vehicles and Vehicle System Analysis**				
11. Responsible lecturer	Dr. Lovas László				
12. Lecturers	Dr. Galambosi Frigyes, Dr. Susánszki Zoltán				
13. Prerequisites	**strong: KOJSM664 - Superstructure preliminary design**				

14. Description of lectures

Construction layouts, regarding manufacturing and tooling. Optimisation of superstructures (manufacturing, weight, stiffness).

15. Description of practices

16. Description of labortory practices

Complete superstructure design using CAD tools.

17. Learning outcomes

A. Knowledge
- the student knows the usual processes in superstructure manufacturing
- knows the special requirements for manufacturing tubes, sheet metals, elastic covers
- knows the superstructure optimisation possibilities concerning shape, size and weight
- knows the principles fo the continous improvement in vehicle industry

B. Skills
- the student is able to prepare the core of a superstructure design of a given type
- is able to prepare a design for easy manufacturing
- is able to optimize the superstructure layout upon given requirements
- is able to perform a superstructure design task alone
- is able to realize the sufficiently detailed numerical model of a superstructure

C. Attitudes
- the student makes an effort to gather all the available informations in a given domain
- cooperates with his fellow students and the teacher
- is open minded towards new and innovative ideas and researches
- uses informatical and computational devices for his work

D. Autonomy and Responsibility
- the student is conscient about his responsibility towards the society and his company
- asks for the colleagues' expertise and judgement when working
- considers challenges with responsibility

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

1 semestrial project work, 1 non-compulsory test. Details for computing the final mark can be find in the subject requirements.

19. Opportunity for repeat/retake and delayed completion

Second test possibility for those not present on the test, possibility of delayed deadline for homework

20. Learning materials

Lecture notes

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