Experimental Modal Analysis II.

1. Subject name	Experimental Modal Analysis II.				
2. Subject name in Hungarian	Kísérleti modálelemzés II.				
3. Code	BMEKOEAD017	4. Evaluation type	exam grade	5. Credits	2
6. Weekly contact hours	2 (0) Lecture	0 (0) Practice	1 (0) Lab		
7. Curriculum	PhD Programme	8. Role	Specific course		
9. Working hours for fulfilling the requirements of the subject					60
Contact hours	42	Preparation for seminars	0	Homework	6
Reading written materials	6	Midterm preparation	0	Exam preparation	6
10. Department	Department of Railway Vehicles and Vehicle System Analysis				
11. Responsible lecturer	Dr. Pápai Ferenc				
12. Lecturers	Dr. Pápai Ferenc				
13. Prerequisites	strong: BMEKOEAD016 - Experimental Modal Analysis I.				

14. Description of lectures

Global model building methods in space. Estimation of non viscous damping parameter. Output-only methods. Study of sensitivity. Parameter estimation in time domain. Modifications in structure dynamics. Structure synthesis. Validation of Finite element models. Excitation methods, tools. Structure diagnostics and its applications. Seismic behavior of a structure. Analyse of large sized structures.

15. Description of practices

16. Description of labortory practices

Measurements on parts and small assemblies, as learnt on the lessons.

17. Learning outcomes

A. Knowledge
- Deep knowledge of modal analysis.

B. Skills
- Measurement and parameter identification of complex structures. Measurement in time domain. Validation of parameters.

C. Attitudes
- Being open to understand and learn novelties on that given domain.

D. Autonomy and Responsibility
- Evaluation and choice of elements for an optimal solution.

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

Semester note upon succesful realisation of the homeworks, realisation of the measurement reports, and a written exam.

19. Opportunity for repeat/retake and delayed completion

Homework and measurement report secondary deadlines precised in the lessons requirements.

20. Learning materials

Effective date	27 November 2019	This Subject Datasheet is valid for	Inactive courses