

Tárgytematika / Course Description Core Elements of Whole Vehicle Engineering

AJNM_JFTA001

Tárgyfelelős neve /

Teacher's name: dr. Feszty Dániel

Félév / Semester: 2023/24/1

Beszámolási forma /

Assesment: Folyamatos számonkérés

Tárgy heti óraszám /

Teaching hours(week): 2/0/0

Tárgy féléves óraszám /

Teaching hours(sem.): 0/0/0

OKTATÁS CÉLJA / AIM OF THE COURSE

I. GOAL OF THE COURSE:

This course offers an overview of the areas of whole vehicle development, its most important questions, and its upcoming challenges. Furthermore it gives a deeper insight into the simulation and testing methods of modern whole vehicle engineering process, as well as covers the basics of applied vehicle physics, mathematics and measurement techniques. The lectures are held by leading industrial experts in Whole Vehicle Development.

TANTÁRGY TARTALMA / DESCRIPTION

Topics:

1. Introduction to vehicle development I.
2. Introduction to vehicle development II.
3. Vehicle characteristics
4. Acoustics I.
5. Acoustics II.
6. Acoustics III.
7. Durability and durability test I.
8. Durability and durability test II.
9. Virtual vehicle development
10. Recycling
11. Life cycle analysis
12. Thermomanagement and flow science
13. Energy management I.
14. Energy management II.

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD

I

COURSE EVALUATION:

There will be a **5-MINUTES LONG ONLINE QUIZZ** from the previous lectures material at the beginning of each **lecture**, with about 5-8 multiple choice questions. The total weight of all these quizzes will be 20% in the course grading.

THE FINAL EXAM is 1.5 hrs long and of multiple choice format. The final exam is written online and involves answering 45 multiple choice questions in a computer. The final exam is of closed-book format.

This means that the course grading will be the following:

5-minutes short quizzes: 20% (in total)

Final exam: 80%

II. FINAL GRADING

The final grade for the course will be allocated based on the following scheme:

Percentage	Grade
0 - 39	1 (Fail)
40 - 54	2

55 - 69	3
70 - 84	4
85 - 100	5

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

I. TEXTBOOKS:

There are no set textbook required for this course. However, the following references might be useful for the students:

Julian Happian-Smith: Introduction to modern vehicle design, ISBN 978-0-0805-2304-0

David Crolla: Encyclopedia of Automotive Engineering, ISBN 978-0-4709-7402-5

Joao Paulo Carmo and Joao Eduardo Ribiero: New advances in vehicular technology and automotive engineering, ISBN 978-9-5351-0698-2

Marcello Chiaberge: New trends and developments in automotive system engineering, ISBN 978-9-5330-7517-8

Marcello Chiaberge: New trends and developments in automotive industry, ISBN 978-9-5330-7999-8

AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL