Tárgytematika / Course Description

Internal Combustion Engines 2.

AJNB_BMTA004

Tárgyfelelős neve / Teacher's name: dr. Knaup Jan Christopher
Félév / Semester: 2020/21/2
Beszámolási forma / Assesment: Vizsga
Tárgy heti óraszáma / Teaching hours(week): 3/0/1
Tárgy féléves óraszáma / Teaching hours(sem.): 0/0/0

OKTATÁS CÉLJA / AIM OF THE COURSE

The aim of this course is to introduce the structure of the valvetrain, its functions and mechanisms in order to give a better understanding of the gas exchange processes of internal combustion engines. The course will follow up the topics introduced previously and expand them with details on up-to date developments, how the auxiliary equipment of the engine is operating. Students will have to submit an article review in teams as a semester work.

TANTÁRGY TARTALMA / DESCRIPTION

1. Week: Gas exchange
2. Week: Valvetrain mechanisms
3. Week: Parts of the valvetrain
4. Week: Parts of the valvetrain
5. Week: Variable valvetrain
6. Week: Variable valvetrain
7. Week: Turbocharging
8. Week: Supercharging
9. Week: Cooling
10. Week: Lubrication
11. Week: Oil Types
12. Week: Pre - Exam
13. Week: Engine Overhaul
14. Week: Summary and presentation of the semester work

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD

Exam (80%) + Semester work (20%)

0% - 50% - Failed (1)
51% - 65% - Pass (2)
66% - 75% - Satisfactory (3)
76% - 85% - Good (4)

86% - 100% - Excellent (5)

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

- Internal Combustion Engine Handbook: Basics, Components, Systems, and Perspectives by Richard Van Basshuysen (Editor), Fred Schafer (Editor), Fred Schaefer, 2004, ISBN 978-0-7680-8024-7
- László Paulovics: Timing of internal combustion engines (Electronic textbook)
- Internal Combustion Engine Fundamentals, John Heywood, 2011, ISBN: 9781260116106