

Tárgytematika / Course Description

Internal Combustion Engines III

AJNM_BMTA027

Tárgyfelelős neve /

Teacher's name: dr. Knaup Jan Christopher

Félév / Semester: 2022/23/1

Beszámolási forma /

Assesment: Vizsga

Tárgy heti óraszám /

Teaching hours(week): 2/0/2

Tárgy féléves óraszám /

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

OKTATÁS CÉLJA / AIM OF THE COURSE

The aim of this course is to expose the relationships between mechanical components of internal combustion engines and their functionality. As an integrating subject, it combines and requires mathematical, thermodynamic and mechanical engineering skills. The course will follow up the topics introduced previously and expand them with details about the components of the valvetrain and all the auxiliary equipment of internal combustion engines. Each student will have to submit an article review 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: Gas Turbines

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD

Exam (60%) + Semester work (40%)

Signature Criteria: All required assessment has to be submitted and reach 50% at least

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