

## Tárgytematika / Course Description Internal Combustion Engines III

AJNM\_BMTA027

**Tárgyfelelős neve /**

**Teacher's name:** dr. Knaup Jan Christopher

**Félév / Semester:** 2024/25/1

**Beszámolási forma /**

**Assesment:** Vizsga

**Tárgy heti óraszám /**

**Teaching hours(week):** 2/0/2

**Tárgy féléves óraszám /**

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

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### 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.

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### TANTÁRGY TARTALMA / DESCRIPTION

1. Week: Introduction
2. Week: Gas exchange
3. Week: Valvetrain mechanisms
4. Week: Parts of the valvetrain
5. Week: Parts of the valvetrain
6. Week: 1st test
7. Week: Variable valvetrain
8. Week: Variable valvetrain
9. Week: Turbocharging

10. Week: Supercharging

11. Week: Cooling

12. Week: Lubrication

13. Week: 2nd test

14. Week: Repeated test

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## **SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD**

In order receive the signature class attendance is mandatory, participation and submission of requested tasks on laboratory workshops are also mandatory. To receive the signature both test have to at least 50%.

0% - 49% - Failed (1)

50% - 62% - Pass (2)

63% - 75% - Satisfactory (3)

76% - 88% - Good (4)

89% - 100% - Excellent (5)

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## **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

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## **AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL**