



1. Subject name	Engine design II.				
2. Subject name in Hungarian	Motortervezés II.				
3. Code	BMEKOGGM671	4. Evaluation type	mid-term grade	5. Credits	5
6. Weekly contact hours	2 (10) Lecture	0 (0) Practice	2 (11) Lab		
7. Curriculum	Vehicle Engineering MSc (J)	8. Role	Specialization (sp) at Vehicle Engineering MSc (J)		
9. Working hours for fulfilling the requirements of the subject					150
Contact hours	56	Preparation for seminars	18	Homework	0
Reading written materials	58	Midterm preparation	18	Exam preparation	0
10. Department	Department of Automotive Technologies				
11. Responsible lecturer	Dr. Zöldy Máté				
12. Lecturers	Nyerges Ádám, Vass Sándor, Bárdos Ádám				
13. Prerequisites	strong: KOGGM670 - Engine design I.				
14. Description of lectures					
Theoretical questions of engine design. Conditions for cylinder design, engine block selection. Crankshaft Engine Structure. Features of its components, solutions used in automotive engines. Crankshaft, flywheel dimensioning. Methods of mass balancing. Usual solutions. Main bearing cover design, material selection. Essential aspects of valve control, customary solutions, design features. Sizing and selecting material for cylinder head. Technical documentation for the engine design. Typical design, design, dimensioning of engine parts. Developing your lubricating, cooling and starting system.					
15. Description of practices					
16. Description of laboratory practices					
Calculating, drawing and consulting parts based on the engine's main workflow calculation.					
17. Learning outcomes					
A. Knowledge <ul style="list-style-type: none">• Knowledge of engine design. B. Skills <ul style="list-style-type: none">• Ability to design an internal combustion engine. C. Attitudes <ul style="list-style-type: none">• Openness to new opportunities in the field. D. Autonomy and Responsibility <ul style="list-style-type: none">• Participate in solving independent task.					
18. Requirements, way to determine a grade (obtain a signature)					
In the course of the semester, 1 midterm test shall be completed. The result of closure matched if more than 50% of the maximum score was achieved. The condition for obtaining a midterm grade is a qualified midterm test. Final grade equals to the result of midterm test.					
19. Opportunity for repeat/retake and delayed completion					
The midterm test can be retaken once.					
20. Learning materials					
Slides and presentation notes					
Effective date	10 October 2019	This Subject Datasheet is valid for		Inactive courses	