

Budapest University of Technology and Economics Faculty of Transportation Engineering and Vehicle Enginee

1. Subject name	Surface Engineering				
2. Subject name in Hungarian	Felületi technológiáł	<			
3. Code	BMEKOGGM647	4. Evaluation type	exam grade	5. Credits	4
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 req	uirements of the s	ubject		120
Contact hours	56	Preparation for seminars	18	Homework	12
Reading written materials	20	Midterm preparation	4	Exam preparation	10
10. Department	Department of Automotive Technologies				
11. Responsible lecturer	Dr. Markovits Tamás				
12. Lecturers	Dr. Markovits Tamás, dr. Takács János, Hlinka József				
13. Prerequisites	ites				
14. Description of lectures					
Interpretation of surf processes. Plasma laser surface treatm	face properties. Func processes and laser f ents). Advanced inve	tion and role in the ve technologies (laser baset baset) estigation techniques	ehicle constructions. asics, beam sources of layers and surface	Surface preparation a , beam guiding, laser- es.	and modification material interaction,
15. Description of practices					
16. Description of labortory practices					
Investigation of laser technologies (preparation, interactions, quality, safety). Wetting tests. Surface examination methods.					
17. Learning outco	omes				
A. Knowledge • Understandi B. Skills • Ability to dev C. Attitudes • Openness to D. Autonomy and Re • Participate in	ing the role of the prevelop the processes. To the new possibilities esponsibility n individual problem s	sented surface prope s of the field. solving.	rties and technologie	95.	
18. Requirements, way to determine a grade (obtain a signature)					
During the semester The requirements for completing the midte The grade can be ob	r 1 midterm test has to or obtaining the signate erm test. btained from the writt	o be completed with ture are the taking pa en exam.	more the 50 % of the rt on labs, submit the	maximal points. independent task in	satisfactory level,
19. Opportunity for repeat/retake and delayed completion					
The midterm test and the submission of individual task can be retaken once.					
20. Learning mate	rials				
Slides and presenta	tion notes				
Effective date	10 October 2019	This Subject Data	sheet is valid for	Inactive courses	