1. Subject name	**Processes of Vehicle Production**				
2. Subject name in Hungarian	Járműgyártás és javítás				
3. Code	**BMEKOGGD003**	4. Evaluation type	**exam grade**	5. Credits	**4**
6. Weekly contact hours	**4 (0) Lecture**	**0 (0) Practice**	**0 (0) Lab**		
7. Curriculum	**PhD Programme**	8. Role	**Basic course**		
9. Working hours for fulfilling the requirements of the subject					**84**
Contact hours	56	Preparation for seminars	0	Homework	8
Reading written materials	8	Midterm preparation	0	Exam preparation	12
10. Department	**Department of Automotive Technologies**				
11. Responsible lecturer	Dr. Markovits Tamás				
12. Lecturers	Dr. Markovits Tamás				
13. Prerequisites					

14. Description of lectures

Sequence of manufacturing processes, its impact on quality, productivity and costs. Sequence planning (pre-products, allowance for machining); operation planning (bases); operation instruction (operation time). Tolerances for different manufacturing technologies.
Measurement technology: measurement methods, regularities of measurement errors, typical measurement tasks and their instruments, coordinate measurements.
Machines for vehicle manufacturing technologies.

15. Description of practices

16. Description of labortory practices

17. Learning outcomes

A. Knowledge

- Has a deeper understanding of how the succession of technological processes affects quality, productivity and costs.
- Knows the purpose and steps of the technological sequence design (pre-products, allowance for machining; operation planning (bases); operation instruction (operation time).
- Knows what tolerances have been expected for different manufacturing technologies.
- Familiar with measurement methods, regularities of measurement errors, typical measurement tasks and tools, coordinate measurements.
- Knows the most important machines of vehicle manufacturing technologies.

B. Skills

- Able to overview the whole and the elements of a technological process and to plan it especially for technology design and quality control.
- Capable of a deeper, causal, scientific analysis of a technological process.
- Able to give suggestions for the development of a technological process.
- She/he is able to gather literature on a specific research topic and compile a summary based on it.
- Able to interpret the results found in the literature.
- Able to develop a suitable experimental method for a research topic and propose test methods.
- Able to interpret test results.

C. Attitudes

- She/he strives to develop his knowledge independently.
- Strives to explore the causal relationship with scientific depth.
- Strives to develop its own topic area.
- Strives to find connections between topics and disciplines.
- Strives to interpret the literature and their own research results independently and in teamwork, listening to others'

thoughts.
- Strives to share her/his knowledge.

D. Autonomy and Responsibility
- Apply responsibly the knowledge acquired during the course with regard to their validity limits.
- Manages and communicates the results of others and their own results also in accordance with ethical standards.
- Endeavors to perform his assigned tasks independently in accordance with ethical standards.
- She/he knows how far his responsibilities are, informs his colleagues or his supervisor about her/his results, and when it is necessary

18. Requirements, way to determine a grade (obtain a signature)

The course ends with an oral examination.

19. Opportunity for repeat/retake and delayed completion

Possibilities for supplementation takes place in accordance with the applicable study and examination rules.

20. Learning materials

1. Kalpakijan S.: Manufacturing Engineering and Technology, Prentice Hall, 2013.
2. Flinn R. A., Trojan P. K.: Engineering Materials and Their Applications, Houghton Mifflin Co International Inc., 1989.

Effective date	27 November 2019	**This Subject Datasheet is valid for**	Inactive courses