



1. Subject name	Research and development process in the vehicle industry				
2. Subject name in Hungarian	Járműipari kutatás és fejlesztés folyamata				
3. Code	BMEKOGGM614	4. Evaluation type	mid-term grade	5. Credits	2
6. Weekly contact hours	2 (7) Lecture	0 (0) Practice	0 (0) Lab		
7. Curriculum	Vehicle Engineering MSc (J)	8. Role	Mandatory (mc) at Vehicle Engineering MSc (J)		
9. Working hours for fulfilling the requirements of the subject					60
Contact hours	28	Preparation for seminars	4	Homework	0
Reading written materials	16	Midterm preparation	12	Exam preparation	0
10. Department	Department of Automotive Technologies				
11. Responsible lecturer	Dr. Zöldy Máté				
12. Lecturers	Wahl István				
13. Prerequisites					
14. Description of lectures					
Research, development and quality. Quality Function Deployment (QFD). Creativity and innovation in research development. The relationship between automotive research and development and continuous innovation activity. Innovation management. Production strategy, quality strategy. Process of product strategy development, product life cycle planning. Innovation management. Managing and evaluating new product ideas. Continuing product ideas into acquisition, development and serial projects. Concept and process of research projects. Features and steps of basic and applied research. List of requirements and product specification. Benchmarking. Concept and process of development projects. Set cost and quality goals. Concept development, concept decision. Preparing and evaluating a feasibility study. Concept of A, B and C patterns. Continuation of the pre-development project into series development. Making a business plan. The concept and process of serial development, product <a href="#">introduction</a> . Steps of serial development, checking and certifying product requirements. V-model concept and steps. Tracking and monitoring the development steps and processes. Production approval process, steps. Raising production, production support. Feedback from experience and production to the research and development process.					
15. Description of practices					
16. Description of laboratory practices					
17. Learning outcomes					
A. Knowledge <ul style="list-style-type: none"><li>• Knowledge of the relationship between research and development and quality.</li></ul> B. Skills <ul style="list-style-type: none"><li>• Ability to improve the relationship between research and development and quality.</li></ul> C. Attitudes <ul style="list-style-type: none"><li>• Openness to new opportunities in the field.</li></ul> D. Autonomy and Responsibility <ul style="list-style-type: none"><li>• Participate in solving independent task.</li></ul>					
18. Requirements, way to determine a grade (obtain a signature)					
During the semester 1 midterm test has to be completed with more the 50 % of the maximal points. The conditions for obtaining the midterm grade is the completing the midterm test, the midterm grade reflects the result of the 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	2023/2024 semester II
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