

Óbuda University Donát Bánki Faculty of Mechanical and Safety Engineering		Institute of Machine Design and Safety Engineering		
Name of the subject: Design of quality in safety-critical vehicle systems BG		Credit: 2		
<i>English language course 2014/2015. spring semester valid until recalled</i>				
Mechatronics BSc (optional)				
Subject leader:	Dr. Tímea Lázár-Fülep	Lecturer:	Dr. Tímea Lázár-Fülep	
Prerequisites:	-			
Weekly hours: 2	Lecture: 2	Group seminar: 0	Lab: 0	Consultation:
Requirements (s,v,f):	f – mid-term test			
Course description:				
Introduction to requirements of certain safety-critical vehicle system architectures and those quality methods and procedures, which are mostly applied during automotive development processes.				
Schedule:				
Week	Topic			
1-2.	Safety and reliability – fundamentals, relations.			
3.-4.	Intelligent and safety-critical vehicle systems and their role in traffic.			
5.-6.	Introduction to electronic system reliability.			
7.-8.	Introduction of requirements and related relevant standards. Challenge during design: design to safety and reliability.			
9.-10.	Introduction to one of the mostly applied qualitative reliability methods in automotive development process.			
11.-12.	Introduction to one of the mostly applied quantitative reliability methods in automotive development process.			
13.	Student lectures.			
14.	Mid-term test.			
15.	Repeated test. Signatures and mid-term marks.			
Conditions for the signature:				
The mid-term test must be written or a lecture must be given based on the given topics provided by the subject leader. If the test or the repeated test are not accepted and no lecture was given, then the semester is invalid and no signature will be given.				
Recommended books and notes:				
1. Beasley, M.: Reliability for engineers: An introduction, Macmillan Press Ltd., 1991.				
2. Thompson, G.: Improving maintainability and reliability through design, Professional Engineering Publishing, London, 1999.				
3. Tímea Fülep: Design Methods of Safety-Critical Electronic Automotive Systems - Quality – Requirement – Reliability, LAP Lambert Academic Publishing, 2012				

Date: 07. 04. 2016.

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subject leader