



BME
Automotive
Technologies

Methodology of automotive design and testing

Department of Automotive Technologies

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Introduction



- Introduction
 - contact: gabor.sipos.uni@gmail.com
- Subject
 - Goal
 - Participation: Lectures and labs
- Tests
 - Tests for semester signature ~7&13th weeks
 - Based on the result of tests, grade
- Note
 - To prepare for exam/tests presentations will be uploaded to Moodle, but the some of the slides aren't – therefore to have the full picture lectures shall be attended.

Requirements



- Midterm I & II (min level according to TVSZ)
- Semester project
 - Crew size 3-4
 - Mandatory for signature
 - Extra points

Schedule



Week nr.	Date		Lecture (Wednesday)		Lab (Wednesday)	Comment
1	09.04.	1	General information		1 Lab	
2	09.11.	2	Development methods		2 Lab	Online
3	09.18.	3	Design goals and requirements		3 Lab	
4	09.25.	4	Conceptualization I		4 Lab	
5	10.02.	5	Design guidelines		5 Lab	
6	10.09.	6	Testing strategies in the automotive industry		6 Lab	
7	10.16.	T1	Midterm exam I.			
8	10.23.	B	National holiday			
9	10.30.	7	System level testing	T1 R	Exam 1 - Retake	Online
10	11.06.	8	Performance and reliability testing		7 Lab	
11	11.13.	9	Troubleshooting and error calculation		8 Lab	
12	11.20.	10	Project management		9 Lab	Online
13	11.27.	T2	Midterm exam II.			
14	12.04.	T2R	Exam 2 - Retake			

Subject background



The Golden Circle

WHAT

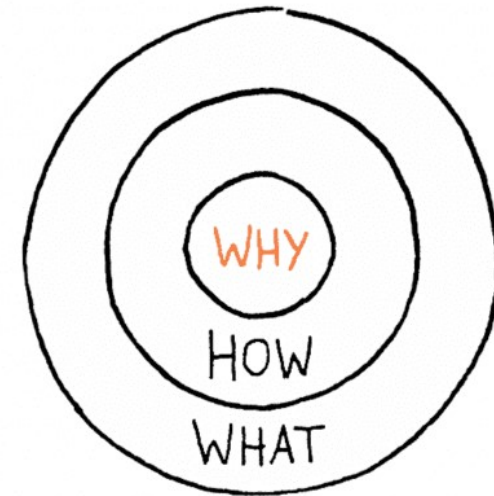
Every organization on the planet knows WHAT they do. These are products they sell or the services

HOW

Some organizations know HOW they do it. These are the things that make them special or set them apart from their competition.

WHY

Very few organizations know WHY they do what they do. WHY is not about making money. That's a result. WHY is a purpose, cause or belief. It's the very reason your organization exists.



Who are we?



- Background
 - School
 - Projects
 - Interests
 - Motivation
 - Goals
- Subject
 - Expectations
 - Dedicated effort

Semester project



- Form groups of 3-4 people, send me an email with names and task until next lecture!

Closing



- Bibliography
 - See bottom of slides
- Literature
 - W. Ernst Eder: Engineering Design: Role of Theory, Models, and Methods
 - Julian Weber - The Automotive Development Process: Processes for Successful Customer Oriented Vehicle Development
 - Markus Maurer, Hermann Winner - Automotive Systems Engineering
 - Christian Grönroos - The V-Model of Service Quality: An Application in Automotive Services
 - Gerhard Pahl, Wolfgang Beitz - Engineering Design: A Systematic Approach
 - Jiju Antony - Design of Experiments for Engineers and Scientists
 - Dominic Haider - Automotive Functional Safety: A Complete Guide to ISO 26262
 - Bercsey Tibor - A terméktervezés módszertana. Jegyzet
 - Pahl-Beitz - A géptervezés elmélete és gyakorlata



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Thank you for your attention!