



# Járműfejlesztési Tanszék

Audi Hungaria Járműmérnöki kar  
Széchenyi István Egyetem, Győr, Magyarország

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## OKTATÁS

MSc Program

PhD Program

Formula Student

Tantárgyak

NUMERIKUS ÁRAMLÁSTAN

JÁRMŰAKUSZTIKA

JÁRMŰFEJLESZTÉS ALAPJAI

DURABILITY AND FATIGUE IN VEHICLE  
ENGINEERING

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## Durability and fatigue in vehicle

### Course I. topics:

- Importance of fatigue assessment for vehicle development
- Theory of structural durability: loading, load capacity and stress
- Dimensioning concepts, influence of predicted lifetime

- Load capacity at constant load amplitudes, Wöhler curves and fatigue tests
- Cyclic stress-strain-diagrams
- From crack to failure - a short introduction into fractography
- Influence of medium stress and stress ratio

**Course II. topics:**

- Load capacity at variable load amplitudes, Gassner curves and fatigue tests
- Stresses at operational conditions, ordinary usage vs.



- Load-time-functions
- Load measurement (stresses, strains, forces, accelerat
- Deterministic and stochastic loads
- Counting procedures and load spectrums (e.g. rainflo
- Damage accumulation, numerical approaches
- Nominal and local concepts in structural durability
- Dimensioning of components and vehicles

**Course administrator** - Dr. B. Vehovszky - SZE

**Instructor** - Dr. A. Dörnhöfer - AUDI AG, Dr. G. Bodai, Dr. M



**AJÁNLOM**



**KEDVENCEKHEZ**

