**Name of module:** Reliability  
**Keywords:**  
**Module number:** Not compulsory  
**Target groups:** exchange students  
**ECTS - Credits:** 2  
**Language of instruction:** English  
**Module owner:** Prof. Dr.-Ing. Andreas Fritz  
**Date of last change:** 30.09.2015

### Extent of work (hours)

<table>
<thead>
<tr>
<th>Workload</th>
<th>Contact hours</th>
<th>Self study</th>
<th>Exam preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>25</td>
<td>25</td>
<td>10</td>
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</tbody>
</table>

### Prerequisites:

**Total target:** The aim of the module is to provide an introduction to the methods and tools used to determine the reliability of components and of engineering systems.

**Module number:** Not compulsory

**Module content:**
- Definition, significance and overview of reliability, techniques in the product development and in the product life cycle
- Statistics, probability theory, life time distribution, reliability of systems
- FMEA
- Boolean system theory
- Proof of reliability, planning of tests, collecting field data
- Availability of systems
- Repairable systems
- Reliability software
- Markov theory

**Reference material:** Lecture notes

**Offered:** WS

**Relevance for other study programs:** Automotive Engineering

### Submodules and assessments

**Title of submodule:**

**Type of instruction / form of learning:** Lectures

**Hours per week:** 2

**Target groups:** exchange students

**Aims, learning outcomes:** See above

**Estimated student workload:** 60 h

**Type of assessment:** written exam