

## Module description

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<b>Name of module:</b>	Reliability
<b>Keywords:</b>	
<b>Module number:</b>	Not compulsory
<b>Target groups:</b>	exchange students
<b>ECTS - Credits:</b>	2
<b>Language of instruction:</b>	English
<b>Module owner:</b>	Prof. Dr.-Ing. Tobias Leopold
<b>Date of last change:</b>	07.03.2024

### Extent of work (hours)

Workload	Contact hours	Self study	Exam preparation
60	25	25	10

<b>Prerequisites:</b>	
<b>Total target:</b>	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.
<b>Module number:</b>	Not compulsory
<b>Module content:</b>	<ul style="list-style-type: none"> <li>• Definition, significance and overview of reliability, techniques in the product</li> <li>• development and in the product life cycle</li> <li>• Statistics, probability theory, life time distribution, reliability of systems</li> <li>• FMEA</li> <li>• Boolean system theory</li> <li>• Proof of reliability, planning of tests, collecting field data</li> <li>• Availability of systems</li> <li>• Repairable systems</li> </ul>
<b>Reference material:</b>	Lecture notes
<b>Offered:</b>	WS
<b>Relevance for other study programs:</b>	Automotive Engineering

### Submodules and assessments

<b>Title of submodule:</b>	
<b>Type of instruction / form of learning:</b>	Lectures
<b>Hours per week:</b>	2
<b>Target groups:</b>	exchange students
<b>Aims, learning outcomes:</b>	See above
<b>Estimated student workload:</b>	60 h
<b>Type of assessment:</b>	written exam