

t.MEST2 - Mechanik für Systemtechnik 1

Person responsible for the course: Michael Warden, wami
Responsible OU: IMS
ECTS: 2
Valid for: 2012/2013
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Expertise:

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Methodological skills:

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Social skills:

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Personal skills:

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Learning objectives:

The students are capable of applying both static and kinetic friction laws and to determine the forces involved between contacting surfaces.

They are familiar with the basic concepts of the theory of elasticity, such as stress, strain, and Hooke's law.

The students can calculate the load capacity of bars subjected to tension and compression.

Course content:

Lectures:

- Forces in beams (shear and moment diagrams)
- Static and kinetic friction (General concepts, laws of friction, bolts, jackscrews, belt friction)
- Tension and compression in bars

Problem solving:

Problems are handed out which have to be solved as home work. These are discussed during the lectures.

Previous knowledge:

MEST1

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x2
Tutorial/Practicum	
Block instruction	

Assessment:

According to the table or as specified in writing by the lecture at the beginning of the semester!

description	type	form	scope	assessment	weighting
Performance records during school hours	test	written	45 min	1-6	20%
Semester end exam	test	written	90 min	1-6	80%

Language of instruction:

German

Instruction material:

- Gross D., Hauger W., Schröder J., Wall W.A.: Technische Mechanik. Statik (Band 1), Springer-Lehrbuch, Berlin Heidelberg.
- Gross D., Hauger W., Schröder J., Wall W.A.: Technische Mechanik. Elastostatik (Band 2), Springer-Lehrbuch, Berlin Heidelberg.
- Problems (can be downloaded from the server)

Additional literature:

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Comments:

None