t.MEST1 - Mechanik für Systemtechnik 1

| Person responsible for the course: | Michael Warden, wami | | | | | |
|------------------------------------|-----------------------|--|--|--|--|--|
| Responsible OU: | IMS | | | | | |
| ECTS: | 2 | | | | | |
| Valid for: | 2012/2013 | | | | | |
| Last saved: | ved: 22.03.2013 14:36 | | | | | |
| Expertise: | | | | | | |
| Methodological skills: | | | | | | |
| - | | | | | | |
| Social skills: | | | | | | |
| - | | | | | | |
| Personal skills: | | | | | | |
| - | | | | | | |
| Learning objectives: | | | | | | |

The students are familiar with the basic concepts and notions of statics. These include space, mass, force, torque, point mass, rigid body and distributed forces. The students are capable of analyzing systems in equilibrium by assuming they are rigid bodies. They can calculate reaction forces at supports and connections for three dimensional structures in equilibrium.

Course content:

Lectures:

- Fundamental concepts
- Concurrent forces
- Force Systems and equilibrium of rigid bodies
- Centers of gravity
- Reactions at supports

Problem solving:

Problems are given which have to be solved as home work. These are discussed in the lectures.

Previous knowledge:

none

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 | writen | 45 min | 1-6 | 20% |
| Semester end exam | test | writen | 90 min | 1-6 | 80% |

Language of instruction:

English

Instruction material:

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

Additional literature:

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Comments:

none