Zurich University of Applied Sciences

School of Engineering

t.MEST4 - Mechanik für Systemtechnik 4

Person responsible for the course:	Michael Warden, wami
Responsible OU:	IMS
ECTS:	2
Valid for:	2012/2013
Last saved:	22.03.2013 15:23

Expertise:

-

Methodological skills:

-

Social skills:

-

Personal skills:

-

Learning objectives:

The students can analyze both free and forced vibrations (mechanical oscillations) with or without damping respectively. They are familiar with different solutions including solving the equation of motion, using energy methods, or solving the problems in the frequency domain.

Course content:

Lecture:

- Free undamped vibrations of 1-degree-of-freedom systems (1DOF)
- Free damped vibrations of 1-degree-of-freedom systems (1DOF)
- Harmonic excitation of 1DOF
- Free vibrations of with two degrees of freedom systems (2DOF)
- Forced vibration of 2DOF

Problem solving:

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

Previous knowledge:

Courses MEST1, MEST2, and MEST3

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

Language of instruction:

German

Instruction material:

- Gross D., Hauger W., Schröder J., Wall W.A.: Technische Mechanik. Kinetik (Band 3), Springer-Lehrbuch, Berlin Heidelberg.
- Problems (can be downloaded from the server)

Additional literature:

-

Comments:

None