Zurich University of Applied Sciences

School of Engineering

t.PE4 - Produktentwicklung 4

Person responsible for the course:	Rudolf Fuchs, fhsr
Credits:	5
Valid for:	2010/2011
Last saved:	12.08.2011 15:39

Learning objectives:

Design of assemblies on the field of gearboxes and drive technology, supported by CAD and systematic design technique.
Creation of project documentations.
Review technique, FMEA analysis.
Project management, planning and controlling of development projects, taking notes from meetings, weekly written reports; creation of presentation documents (in english), presentation of results in English.
Elaborating of solutions individually and in temawork.

Course content:

Machine elements (ME): gears, transmissions, clutches

Practical exercises (PE):
Design of assemblies on the field of gearboxes and drive technolog, supported by CAD and systematic design technique.
Creation of project documentations.
Taking notes from meetings.
Creation of presentation documents (in english)
Estimation of manufacturing costs of assemblies
Planning and controlling of development projects
Review technique, FMEA analysis.
Use of electric components like actors (AC, FU), sensors, wires etc.

Previous knowledge:

Good CAD skills (Catia) in part design, assembly design, drafting.
Good skills in sketching ideas and design concepts.
Knowledge about standard design methodology.
Good English language skills required.

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x2 (machine elements
Tutorial/Practicum	14x4 (practical exercises)
Group teaching	
Block instruction	
Seminar	

Assessment:

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

Number	Type	Weighting
1	End of term exam	60%
1	Exam during the semester	1 ME (10%)
2	Further assessments	2 Practical exercises PE (each 15%)

Language of instruction:

German

Instruction material:

Schoolbook Roloff/Matek Maschinenelemente.
VSM Normenauszug.
Bearing catalogues.
Internet information of different standard part manufacuring companies.
Additional documents on Public (intranetwork).

Comments:

2 lessions focussed on machine elements.
4 contact lessions focussed on practical exercises (1 of the lession is accompanied by a language master (English).
The practical exercises require a continous and self-consistent manner of planning and work in teams and as indididual student. Written weekly reports about the status of the projects are required.