Zurich University of Applied Sciences

School of Engineering

t.ACMV1 - General Chemistry for Materials Engineering 1

Person responsible for the course:	Dirk Penner, penr
Credits:	3
Valid for:	2010/2011
Last saved:	02.08.2011 10:55

Learning objectives:

- Knowledge of structure of electrons in atoms and illustrate its effects
- Knowledge of important metals and non-metals and describing its properties
- Knowledge of ion and covalent bonds as well as transitions
- Explanation and interpretation of the connection between aspects, properties and structure of substances
- Naming important substances
- Describing chemical reactions under stoichiometric, thermodynamic and kinetic aspects
- Knowledge of electrochemical sensors and energy conversion priniples

Course content:

- Structure of atoms and the periodic table of elements
- Types of chemical bonds
- States, structure, and properties of pure substances: gases, fluids and solids
- Chemical reactions - mass balances
-Chemical reactions - kinetics
- Chemical reactions - equilibria
- Chemical reactions - redox reactions
-Chemical reactions - energy balances
-Electrochemistry

Previous knowledge:

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Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14x3L
Tutorial/Practicum	
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	
	weekly execises	
1	mid term test	

Language of instruction:

Deutsch

Instruction material:

Script

Slides

Book: Chemie Mortimer, Müller Thieme ISBN 978-3-13-484309-5

Comments:

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