



Universität Regensburg

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Physical Chemistry Lab Course for Pharmacy Students

Lecture-Nr.: 53765

Type: practical course

Duration: 4 hours per week (block of 6 experiments within 6 lecture weeks; winter)

Method of Assessment: written examination (combined with corresponding lecture)

ECTS Credit Points: 2

Topics:

An introduction into general principles of physical chemistry and associated important physicochemical properties; methods for their experimental determination and techniques for the evaluation of experimental data.

Equilibrium properties and thermodynamics: calorimetry, reaction energy and heat of formation; colligative properties of solutions, cryoscopy, osmotic pressure and tonicity; surface tension and spreading coefficient; electrochemical and acid-base equilibria, galvanic cells and electrolysis.

Kinetics: differential and integral rate law; rate constant and activation energy. Optical methods and spectroscopy: UVvis spectroscopy and Lambert-Beer law, refractive index, polarimetry.

Literature:

1. Ross: Physikalische Chemie für Pharmazeuten und Naturwissenschaftler. WVG, Stuttgart.
2. Martin: Bustamonte, Physical pharmacy. Lea & Febinger, Philadelphia.
3. Meister: Grundpraktikum Physikalische Chemie. UTB, Zürich.

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