



CHIM2162 Methods of physical chemistry

[76h] 4.5 credits

This course is taught in the 2nd semester

Teacher(s): Daniel Peeters, Jacques Vandooren
Language: French
Level: Second cycle

Aims

The objectives of the course will include and analyse in a critical way the acquisitions and treatments of experimental results necessary to the study of a chemical problem. The emphasis will be particularly put on the polyvalent character of the techniques and methods used.

Main themes

The course contains a practical and theoretical formation to the experimental methods of physical chemistry. The aspects treated are mainly:

- thermodynamics in gaseous and condensed conditions (thermo chemistry, phase balance, chemical balance, solution properties, ...)
- the kinetics of chemical reactions (determination of reaction orders, speed constants, ...)
- the properties of transports (gaz kinetic theories, viscosity of gases and liquids, electric field effects, ...)
- Electrochemistry (conductivity, ...)
- Molecular properties (spectroscopy: IR, UV, ..., dielectric properties, ...).

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: general chemistry and basics in physical chemistry.

Evaluation: written report and oral examination.

Support: written notes and reference books.

Data processing via spreadsheet (Excel).

Report writing via word processor (MS word).

Other credits in programs

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Mandatory