Syllabus for General Organic Chemistry for non-chemists, 7,5 ECTS credits.

Aim:
The course will be held for non-chemists on a level suitable for PhD students with little or no earlier knowledge in chemistry. The course provides fundamental knowledge in basic organic chemistry. After completion of the course the student shall have the following knowledge and skills:
- Nomenclature of organic compounds.
- The different functional groups in organic chemistry.
- Basic transformations and reaction mechanisms.
- Explain the properties and reactivity of organic compounds related to structure
- Basic knowledge of methods for transforming molecules
- Basic knowledge of spectroscopic techniques for structure determinations and interpretation of simple spectra and data

Target Group:
PhD Student in areas of Natural Science. PhD students working in physics, materials science, biology and related fields.

Format:
The theoretical part consists mainly of lectures and about 14 lectures (approx.) will be given once a week. The lectures are 2 * 60 minutes. The lessons include problem solving.
The maximum number of students in the course is 12.

Course contents:
* Structure, chemical and physical properties of organic compounds
* Conformations and stereochemistry
* Chemical reactions such as substitution, elimination, addition, oxidation and reduction are treated in the aspect of functional groups
* Transformation of molecules
* Reaction mechanisms, reactive intermediates, energy profiles and kinetics
* Organic spectroscopy, primary Infrared and Nuclear Magnetic Resonance

Course literature:
McMurry, Simanek; Fundamentals of Organic Chemistry. and handouts.

Examination:
Written reports of exercises given continuously through the course 7,5 ECTS

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