

Course title: Microwave-assisted organic synthesis – selectable / ~~regular~~ course

Number of contact hours: 45 hours (15h lectures, 30h laboratories)

ETCS credits: 3

Course description: The lecture reviews different types of organic compounds, methods of their designing and preparation including reaction mechanism, as well as characterization of physicochemical and biological properties using various methods and instruments; applications in different branches of industry will also be discussed. The laboratories consist of exercises on organic compounds production using different components and methods, physicochemical characterization and biological tests.

Education effects (P7S_UW, P7S_WG):

- **knowledge:** student knows the most important types of organic compounds; knows the methods of their preparation and analysis of physicochemical and biological properties
- **skills:** student can synthesize various types of organic compounds and characterize their properties; can use the specific apparatus dedicated for their physicochemical and biological characterization; knows how to prepare high-quality research report from performed laboratory exercises
- **social:** student is able to work independently and in the group both at the laboratories and during preparation of the report

Literature: [1] Tierney J.P, Lidström P — Microwave Assisted Organic Synthesis, Florida USA, 2009, Blackwell Publishing Ltd; [2] De La Hoz A, Loupy A — Microwaves in Organic Synthesis, 2 Volume Set, Weinheim, 2012, Wiley-VCH

Assessment method: Final test, completing the laboratories (presence and delivering of reports from each performed exercise)

Prerequisites: Basic knowledge in organic chemistry and technology

Primary target group: All specialties students

Lecturer: Marek Piątkowski, PhD Eng

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