

Name: Introduction to heterogeneous catalysis (C-PS.II2-IHCataly)

Name in Polish:

Name in English: Introduction to heterogeneous catalysis

Information on course:

Course offered by department: Faculty of Chemistry

Course for department: Faculty of Chemistry

Default type of course examination report:

Grading

Language:

English

Description:

The basic nomenclature, the preparation of catalysts, the characterization of supports and catalysts, industrial examples of catalytic reactions, catalysts deactivation, application of physicochemical methods for the catalysts characterization.

Bibliography:

1. G.C. Bond, Heterogeneous catalysis (2nd edition), Oxford Univ. Press, 1987.
2. All available manuals and specialistic scientific periodicals in English, and also internet resources of the Main Faculty Library of UMCS.
3. Lecture notes (Adsorbents and catalysts, an outline of green chemistry).

Learning outcomes:

KNOWLEDGE

W1. Has knowledge to describe a role of catalysis in the development of our civilization. K_W01

W2. Has knowledge to describe and analyze the correlation between catalysis and chemical processes. K_W01.

W3. Has knowledge to characterize the chosen catalysts in the light of the process where they are applied. K_W01

SKILLS

U1. Can identify and analyze improvements in chemical processes with the catalysts application. chemistry. K_U01

ATTITUDES

K1. Understand creativity and ability of interdisciplinary thinking and catalysis role in our development. K_K06

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Contact hours (work with an academic teacher)

Tutorials 30 hrs

Total number of hours with an academic teacher

30 hrs

Number of ECTS points with an academic teacher

1

Non-contact hours (students' own work)

Literature studies 5 hrs

Preparation and participation in presentations 10 hrs

Poster and/or manuscript preparation 15 hrs

Total number of non-contact hours

30 hrs

Number of ECTS points of non-contact hours

1

Total number of ECTS points for the module

2

Consultation 2 hrs

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Discussion connected with power point presentation. Professional poster preparation and its defence: W1-W3, K1, U1.

Requirements

English knowledge at the average advanced level. Elementary knowledge of chemical technology and applied chemistry as well as physical chemistry.

Course credits in various terms:**<without a specific program>**

Type of credits	Number	First term	Last term
European Credit Transfer System (ECTS)	2	14/15L	