

PhD intensive course

CHEMICAL ENGINEERING

Assoc. Prof. Dr. I. Barauskas, Assoc. Prof. Dr. S. Kitrys

Faculty of Chemical Technology

November 12 - 23, 2018

Aim of the course:

To analyze and to teach the problems of: formal kinetics, kinetics and catalysis of complex chemical reactions; experimental methods of catalysis; processes of mass transfer and pilot plant operation of multiphase systems.

Course format, ECTS credits:

Lectures – 12 hours;

Practice – 8 hours;

Laboratory (supervised) – 16 hours;

Consultation – 8 hours;

Independent Learning – 196 hours;

Visit of „Thermo Fisher Scientific Baltics“ or „Amilina“;

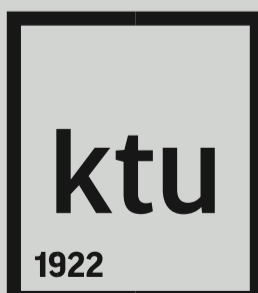
Take-home assignment – Individual work according to the research area of student (2 weeks).

The evaluation is on the Lithuanian 10-scale basis.

Study load: 9 ECTS credits.

Target group:

Prerequisites. A knowledge of flow dynamics, heat and mass transfer, thermodynamics, kinetics, process engineering, have a skills of usage of analytical equipment.



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Main topics of the course:

- Kinetics of chemical reactions
- Catalysis of chemical reactions
- Problems of experimental catalysis
- Mass transfer, moving particles through membranes
- Mass transfer in the extraction processes of solids
- Mass transfer pilot plant operation and analysis

References:

1. M. Coulson, J.F. Richardson. Chemical engineering, volume 1: Fluid Flow, Heat transfer and mass transfer.-Great Britain, The Bath Press.
2. Yunus A. Cengel Dr., John M. Cimbala. Fluid Mechanics Fundamentals and Applications. McGraw-Hill, New York, NY, 2013.
3. S. Shilton. Membrane processes – Notes.

Course schedule:

Start date: 12 November 2018 at 8.30 a.m.

End date: 25 November 2018 at 4 p.m.

Monday – Thursday: 8.30 – 4 p.m. lectures, practice, laboratory works, consultation.

16 November 2018 – visit of company.

23 November 2018 – exam.

Course fee:

10-day 9 ECTS course fee is 810 EUR . Travel, insurance, accommodation expenses *are not* included in course fee.

Course is free of charge for students who come to study under the Erasmus+ program.

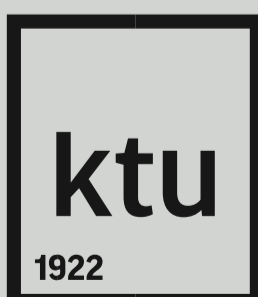
Registration to the course:

Send inquiry to phd@ktu.lt

Registration deadline: 22 October 2018

Contacts: Doctoral School, Kaunas University of Technology

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