

Title Chemical engineering and separation operations	Code 1010701251010720420
Field Chemical Technology	Year / Semester 3 / 5
Specialty -	Course core
Hours Lectures: 3 Classes: - Laboratory: - Projects / seminars: 1	Number of credits 5
	Language polish

Lecturer:

Lubomira Broniarz-Press, D.E., D.Sc., Prof.
Institute of Technology and Chemical Engineering
Phone:
60-965 Poznan, pl.M.Sklodowskiej-Curie 2
+48 61 665-2789
e-mail: Lubomira.Broniarz-Press@put.poznan.pl , mirka@box43.pl
<http://www.fct.put.poznan.pl>

Faculty:

Faculty of Chemical Technology
ul. Piotrowo 3
60-965 Poznań
tel. (061) 665-2351, fax. (061) 665-2852
e-mail: office_dctf@put.poznan.pl

Status of the course in the study program:

fundamental

Assumptions and objectives of the course:

The student should to get a knowledge concerned with the theory and the praxis in the both, one- and multiphase flow design as well as with analysis of the heat and mass transfer in industrial operations.

Contents of the course (course description):

Shearing characteristics of a fluid. Flow of one-phase rheostable fluids. Non-Newtonian technology. Multiphase systems flows and processing operations. Separation operations (particle settling, sedimentation, filtration, flotation, distillation, rectification, crystallization). Heat exchange processes. Humidification and water cooling. Mass exchange processes: classification, mechanisms. Diffusion, mass transfer and absorbers. Heat-mass transfer processes. Optimization and enhancement of transfer processes.

Introductory courses and the required pre-knowledge:

Theoretical principles for currently analyzed questions in design.

Courses form and teaching methods:

lectures + projects

Form and terms of complete the course - requirements and assessment methods:

Permanent control during the courses, current check in the middle of design praxis, preparation of the 1 individual project with assembly drawings and his defense, final examination after semester 4 (written-oral).

Basic Bibliography:

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Additional Bibliography:

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