Title	Code
Process equipment	**1010701141010720087**
Field: **Chemical and Process Engineering**	Year / Semester: **2 / 4**
Specialty: **-**	Course: **core**
Hours: Lectures: **2** Classes: **1** Laboratory: **-** Projects / seminars: **-**	Number of credits: **3**
	Language: **polish**

Lecturer:

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Status of the course in the study program:

fundamental

Assumptions and objectives of the course:

The student should to get both the knowledge of the theory of machines, of the design fundamentals of structural components of industrial apparatuses as well as of fundamental equipments and plants useful in chemical industry and the others processing industries. The special attention is directed on the plant design technique on the basis of brief for design and process standards valid.

Contents of the course (course description):

Fluid-flow machines (pumps, ventilators, blowers), types, characteristics, choice. Scaling of the pumps and rotameters for non-standard media. Fluid transport, transportation of solids. Heat exchangers: types and constructions, schemes of the design calculations for chosen type. Mass exchangers: theoretical basis for design, constructions of columns. Dynamic operation plants. Two- and three-phase fluidized bed equipment (characteristics, principles of selection). Simultaneous heat and mass transfer exchangers. Plants for mechanical operations. Chemical and biotechnological reactors. Modern equipment constructional solutions.

Introductory courses and the required pre-knowledge:

Theoretical fundamentals of the current objectives analyzed

Courses form and teaching methods:

Lectures + classes

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

Permanent control during the course, examination after semester 4, written.

Basic Bibliography:

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Additional Bibliography:

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