STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Technological machines	**1011101441011002395**

Field of study	Profile of study (general academic, practical)	Year /Semester
Logistics - Full-time studies - First-cycle studies	**(brak)**	**2 / 4**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**elective**

Cycle of study:	Form of study (full-time,part-time)
First-cycle studies	**full-time**

No. of hours	No. of credits
Lecture: **15** Classes: **-** Laboratory: **15** Project/seminars: **-**	**2**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)

Responsible for subject / lecturer:

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Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge of manufacturing technology and materials processing as well as basic knowledge of the machines types used for this purpose. Basic knowledge of machine design.
2	**Skills**	Ability to independently acquire knowledge on the topic
3	**Social competencies**	Understanding of the need to broaden skills, willingness to self-solve technical problems

Assumptions and objectives of the course:

1. Provide students the basic knowledge of mechanical and technological equipment and knowledge of the fundamentals of their operation and control.

2. Develop students' skills of self-education with elements of independent learning and the development of technical interest.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Has basic knowledge about the life cycle of the machine. Can define the concept of machinery and technological equipment, and provide examples of machines and their applications - [K1A_W17]
2. Knows the basic methods, techniques, tools and materials used in machines and technological devices - [K1A_W19]

Skills:

1. Can choose the appropriate machinery and equipment to the type of technological operations - [K1A_U15]
2. capable of formulating and solving engineering tasks, perceive their social and economic aspects - [K1A_U10, K1A_U12]
3. Use with understanding of the identified sources of knowledge and can independently improve their education - [K1A_U01, K1A_U05]

Social competencies:

1. understand the need for continuous training in order to improve their qualifications. Can creatively solve problems and with determination seek to technical innovations - [K1A_K01]
2. Communicate technical information in a practical and reliable way - [K1A_K07]
3. behave follow the basic ethical principles - [K1A_K05]

Assessment methods of study outcomes

Lecture: Assessment of lectures on the basis of test (positive assessment in the case of correct answers on half of the questions during the test).

Laboratory: positive assessment on the basis of oral or written response from the scope of the content of each exercise, perform laboratory report after each laboratory exercise using indications leading laboratory. To get positive assessment, all exercise must be credited (positive assessment of the response).

Course description

Lecture:

1. Division of technological machines
2. Mechanical presses
3. Hydraulic presses
4. Rolls machines
5. Guillotine
6. Brake presses
7. Devices for delivering and receiving
8. Equipment for straightening tape
9. Developments in the machines for metal forming

Laboratory:

1. Mechanical presses for example eccentric press and screw press
2. Peripherals, decoilers, straightening machine, feeder
3. Performance of technology on the example of feeder
4. Special machines for example the brake press
5. Properties of popular plastics
6. Preparation of oriented film by casting
7. Shrinkage in injection molding of plastics

Basic bibliography:

1. Golatowski T.: Prasy mechaniczne : Konstrukcja, eksploatacj i modernizacja. Wydawnictwa Naukowo-Techniczne, Warszawa 1970.
2. Tomczak J., Bartnicki J.: Maszyny i urządzenia do obróbki plastycznej, Politechnika Lubelska, Lublin 2012
3. Boczarow J. A.: Prasy śrubowe. Wydawnictwo Naukowo ? Techniczne, Warszawa 1980.
4. Praca zbiorowa: Prasy mechaniczne stosowane w tłocznictwie. Wydawnictwo Naukowo Techniczne. Warszawa 1959.

Additional bibliography:

1. Romanowski W. P.: Poradnik obróbki plastycznej na zimno. Wydawnictwo Naukowo ? Techniczne, Warszawa 1976.

Result of average student's workload

Activity	Time (working hours)

Student's workload

Source of workload	hours	ECTS
Total workload	30	2
Contact hours	30	2
Practical activities	15	0