STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Theory of Machines	**1011101421011122435**

Field of study	Profile of study (general academic, practical)	Year /Semester
Logistics - Full-time studies - First-cycle studies	**(brak)**	**1 / 2**
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: **-**	**3**

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 %)
technical sciences	**3 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge of technology
2	**Skills**	The ability to acquire knowledge
3	**Social competencies**	The ability to work in a group

Assumptions and objectives of the course:

To familiarize students with the basic principles of construction, operation and operation of general purpose machines and equipment, which are equipped in an industrial plan

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

Knowledge:

1. 1. Has a basic knowledge of: engineering graphics; design, technology, the construction and operation of machinery - [K1A_W05] - [-]

2. 2. Has a basic knowledge of: mechanics and machine-building industry as well as the strength of materials - [K1A_W07] - [-]

Skills:

1. 1. Is able to independently develop the problem that exists within the studied subject - [K1A_U05] - [-]

2. 2. Can make use of analytical, experimental and simulation method which falls within the scope of this area, can solve the project problem in the area of logistics and its detailed concepts (inventory management, logistics, distribution logistics and supply, logistics, ecologistics) and supply chain management - [K1A_U09] - [-]

Social competencies:

1. Is aware of the need for lifelong learning; inspiring and organizing the learning process of other persons within the framework of the studied subject areas - [K1A_K01] - [-]

2. Is willing to work together and work in a group on the resolution in the framework of the studied subject - [K1A_K03] - [-]

Assessment methods of study outcomes

-Formative assessment:

a) within the scope of the laboratory: on the basis of an assessment of the current progress of the assigned tasks related to the construction, operation and operation of general purpose machinery and equipment.

b) in lectures: on the basis of answers to questions about material modified in previous lectures.

Summary summary:

a) lecture - written test on the basis of previously prepared questionnaire

b) Written assignment of assigned tasks related to the construction, operation and operation of general purpose machinery and equipment within individual visits to production sites.

Course description

Program content:

lectures:

- Introduction to subject matter, basic concepts, machine classification,
- standardization, typisation and unification of machine parts and subassemblies,
- Clutches, brakes, gears,
- Mechanisms used in machine tools,
- Machines and devices for transport, trolleys, cranes, overhead cranes, cranes, conveyors,
- Compressors and fans,
- Pumps, water motors, turbines
- Installations, pneumatic, hydraulic,
- Refrigeration equipment,
- Internal combustion engines

Laboratories: To familiarize yourself with the construction, operation and operation of general purpose machinery and equipment as part of technical visits to production sites.

Didactic methods:

lectures; monographic with the use of a computer with the division of the content of the program into separate thematic issues in connection with the subject of the laboratory

Laboratories: visits to production facilities in the field of familiarization with the operation and operation of general purpose machinery and equipment

Basic bibliography:

1. Kijewski J. , Maszynoznawstwo, WSiP, Warszawa 2011
2. Dąbrowski Z, Pakowski R: Maszynoznawstwo; Warszawa 2013;
3. Legutko S., Podstawy eksploatacji maszyn i urządzeń,WSiP Warszawa 2004
4. Gruszka J., Technologiczne kształtowanie cech funkcjonalnych warstwy wierzchniej tulei cylindrowych (w silnikach spalinowych)-Monografia, Wyd.PP, Poznań 2012

Additional bibliography:

1. S.Legutko Eksploatacja maszyn, Wyd. Politechnika Poznańska. Poznań 2007
2. Rutkowski A.,Części maszy, Wyd.WSiP,1992

Result of average student's workload

Activity	Time (working hours)

Student's workload

Source of workload	hours	ECTS
Total workload	80	3
Contact hours	30	2
Practical activities	15	1