COURSE DESCRIPTION CARD - SYLLABUS

Course name
Theory of Machines [S1Log2>MASZ]

Course

Field of study
Logistics

Year/Semester
1/2

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
polish

Form of study
full-time

Requirements
elective

Number of hours

Lecture
15

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

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Lecturers

dr Katarzyna Kalisz-Szwedzka
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Prerequisites

Basic knowledge of technique.

Course objective

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.

Course-related learning outcomes

Knowledge:
1. The student knows the basic issues of construction of machines related to logistics [P6S_WG_01]
2. The student knows the basic issues of mechanics, and operation of machines related to logistics [P6S_WG_02]

Skills:
1. Student is able to apply appropriate analysis techniques to solve a problem related to the construction and operation of machines [P6S_UW_03]
2. Student is able to identify changes in norms, standards and regulations in the field of mechanical

engineering [P6S_UU_01]

Social competences:
1.Student is aware of initiating activities related to the formulation and transfer of information about the proper operation of machines [P6S_KO_02]
2. Student is aware of cooperation and team work to solve problems related to the operation of machines [P6S_KR_02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Formative assessment: on the basis of answers to questions about material modified in previous lectures. Summary assessment: written test on the basis of previously prepared questionnaire.

Programme content

Lecture: 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.

Teaching methods

Lecture: monographic with the use of a computer with the division of the content of the program into separate thematic issues in connection.

Bibliography

Basic:
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), Wydawnictwo Politechniki Poznanskiej, Poznań 2012.

Additional:
1. Legutko S., Eksploatacja maszyn, Wydawnictwo Politechniki Poznańskiej, Poznań 2007.
2. Rutkowski A., Części maszy, WSiP, Warszawa 1992.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	10	0,50