STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Logistic technology and infrastructure**		Code **1011101231011112895**
Field of study **Logistics - Full-time studies - First-cycle studies**	Profile of study (general academic, practical) **(brak)**	Year /Semester **2 / 3**
Elective path/specialty **-**	Subject offered in: **Polish**	Course (compulsory, elective) **obligatory**

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

No. of hours				No. of credits
Lecture: **30** Classes: **-** Laboratory: **-** Project/seminars: **15**				**4**

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

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

technical sciences
      Technical sciences
	4 100%
	         4 100%

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	The student has the basic knowledge on technique and principles of the functioning of enterprises, as well as the country and the region.
2	**Skills**	The student is possessing a skill of noticing, associating and interpreting phenomena occurring in the economy
3	**Social competencies**	The student is aware of the influence of logistics on the economy, society, man and his environment.

Assumptions and objectives of the course:

Presentation of an ordered knowledge on basic elements of technology, technique and logistic infrastructure and description of their objectives in logistic processes, with reference to economic and business phenomena, as well as their importance for man and his environment. Graduates of various secondary schools have the chance for aligning their knowledge from the scope of presented objectives. It is a crucial condition for studying in future semesters.

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

Knowledge:

1. has basic knowledge on engineer drawing, construction and technology and construction and exploitation of machines (T1A_W02) - [K1A_W05]

2. knows principle dependencies applicable in a framework of the logistics and its detailed issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_W03) - [K1A_W14]

3. is able to explain basic terms in logistics and its specified issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_W03) - [K1A_W15]

4. is able to recognize basic phenomena characteristic for logistics and its detailed issues (issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_W03) - [K1A_W16]

5. is able to explain in details phenomena of terms characteristic for logistics and its specified issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_W04) - [K1A_W17]

6. knows how to formulate principle dependencies applicable within logistics and its detailed issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_W04) - [K1A_W18]

7. is able to point at modern trends in logistics and its specified issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_W05) - [K1A_W19]

8. is able to characterize best practice in logistics and its specified issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_W05) - [K1A_W20]

9. knows basic methods, techniques and instruments and materials applied in solving simple engineer tasks from the scope of logistic systems and processes design (T1A_W07) - [K1A_W23]

Skills:

1. basing on literature of the subject and other sources is able to present in an ordered way information concerning problems from the scope of logistics and its specified issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management - [K1A_U01]

2. is able to present a problem with help of properly selected means, if the issue is from the area and its specified issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management - [K1A_U02]

3. is able to use proper information and communication instruments to problems enclosed within frames of the studied subject (T1A_U07) - [K1A_U07]

4. is able to formulate project tasks with use of analytic, simulation and experimental methods that is within the area of logistics and its specified issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_U09) - [K1A_U09]

5. is able to assess a determined problem from the economic point of view, if it is within the area of logistics and its specified issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_U12) - [K1A_U12]

6. is able to make a critical analysis in reference to a problem from the area of logistics and its specified issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_U13) - [K1A_U13]

7. is able to design an object, system or a process with use of correct methods and techniques, if it is within the area of logistics and its specified issues (supply management, distribution logistics, production and supply logistics, logistics of the use, ecologisticse) and supply chain management (T1A_U16) - [K1A_U16]

Social competencies:

1. is aware of the need of lifelong learning and inspiring and organizing the process of lifelong learning for other people within the studied subject (T1A_KO1) - [K1A_K01]

2. be sensitive to environmental and ergonomic aspects and effects of engineer activity, including responsibility for decisions he makes within frames of work conditions and environmental protection within issues of logistics and supply chain management (T1A_KO2) - [K1A_K02]

3. is willing to cooperate and work in a team on solving problems from the area of the studied subject (T1A_KO3) - [K1A_K03]

4. is able to identify and solve correctly dilemmas connected with the profession of logistic specialist (T1A_K05) - [K1A_K05]

5. knows engineer technologies typical in the range of logistics and its detailed issues and supply chain management, like for example the balance method, methods of the account of cycles of supplies in the sphere of the supply, the production and distribution, methods of calculating supplies, method of making plans for the material demand with its applications (InzA_W05) - [KInzA_W05]

Assessment methods of study outcomes

-forming assessment:

project: on basis of the evaluation of the realized following stages of the project and the knowledge of topics necessary for its realization. The work within the project team is important

lectures: basing on questions asked during the lecture, which refer to previous lectures on the subject.

- final assessment:

project: public presentation of the project (in front of the entire group) and discussion

lectures: exam in form of discussion: 2-3 students discuss with the examining person topics from lectures. The accession to the exam is based on positive assessment of the project. The exam is passed when the student gives correct answers for the majority of questions

Course description

The program of the subject encloses following topics: logistic infrastructure classification, means of close and far transport ? the idea, classification, tasks, problem of selection of transport means, warehouse ? the notion, classification, tasks, warehouse equipment, logistic centers the notion, classification, tasks, significance in the transport system and the region, handling systems and packages - the idea, classification, tasks in the area of production, transport and storage

Basic bibliography:

1. Pfohl H.-Ch., Systemy logistyczne, ILiM-Poznań , 1998

2. Korzeniowski A., Szyszka G., Skrzypek M., Opakowania w systemach logistycznych, ILiM-Poznań , 2001

3. Fechner I., Centra logistyczne cel-realizacja-przyszłość, ILiM-Poznań , 2004

4. Mendyk E., Ekonomika i organizacja transportu, WSL, Poznań, 2002

5. Transport, Rydzykowski W., Wojewódzka-Król K. -red. , PWN, 2006

Additional bibliography:

1. Głowacka-Fertsch D., Fertsch M., Zarządzanie produkcją, WSL, Poznań, 2004

2. Skowronek Cz., Syrjusz-Wolski Z., Logistyka w przedsiębiorstwie, PWE, Warszawa 1999

Result of average student's workload

Activity	Time (working hours)
1. lecture	30
2. project classes	15
3. project - work in groups	15
4. Consultations	15
5. exam	5
6. open learning	20

Student's workload

Source of workload	hours	ECTS
Total workload	100	4
Contact hours	65	3
Practical activities	50	2