COURSE DESCRIPTION CARD - SYLLABUS

Course name
Technique, technology and infrastructure of Logistics [S1Log2>TTiIL]

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
compulsory

Number of hours

Lecture
30

Laboratory classes
15

Other
0

Tutorials
0

Projects/seminars
15

Number of credit points

5,00

Coordinators

dr inż. Piotr Lubiński
piotr.lubinski@put.poznan.pl

Lecturers

Prerequisites

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

Course objective

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.

Course-related learning outcomes

Knowledge:
1. Student has basic knowledge on engineer drawing, construction and technology and construction and exploitation of machines [P6S_WG_01]

2. Student 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 [P6S_WG_08]
3. Student 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 [P6S_WK_05]

Skills:
1. Student 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 [P6S_UW_01]
2. Student 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 [P6S_UK_01]
3. Student is able to use proper information and communication instruments to problems enclosed within frames of the studied subject [P6S_UW_02]

Social competences:
1. Student is aware of the need of lifelong learning and inspiring and organizing the process of lifelong learning for other people within the studied subject [P6S_KK_02]
2. Student 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 [P6S_KR_01]
3. Student is willing to cooperate and work in a team on solving problems from the area of the studied subject [P6S_KR_02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Forming assessment: Basing on questions asked during the lecture, which refer to previous lectures on the subject. Final assessment: Final conversation 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.
Project: Forming assessment: 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. Final assessment: public presentation of the project (in front of the entire group) and discussion.
Laboratory: Forming assessment: participation in laboratory classes and timely delivery complete report; Final assessment: average of partial grades.

Programme content

Lecture: 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.
Project: Analysis and evalouation of the logistics infrastructure in the conditions (optimalization attempt) in the scope of drafting content (company characteristics, classification of logistic infrastructure: short and lond distanse means of transport; the problem of selecting means of transport; magazine and warehouse equipment; reloading systems and packaging).
Laboratory: Funcional analysis of the loigistics infrastructure - operational parameters of the infrastructure logistisc, including buildings and structures, and means of short and long transport; the problem of selectionmeans of transport; werehouse equipment; reloading systems.

Course topics

Lectures cover a broad range of logistics techniques and technologies, as well as the infrastructure used in logistics processes. These include elements supporting information processing equipment. In the project

section, Students analyze logistics processing in a selected enterprise and select optimal equipment to support these processes. Project teams also focus on economic issues and the impact of the selected solutions, on people and the environment. The final task is prepare and conduct a public presentation.

Teaching methods

Lecture: information lecture,multimedia presentation, illustrated with examples on the board, discussion seminar.
Project: project method, multimedia presentation illustrated with examples, work in 3 students project teams with the support of the trainer, indyvidual consultations for each team, the coronary presentation at the forum of the dean's group.
Laboratory: thematic laboratory tasks in teams of 3 students, preparation reports with independent conclusions, final grade: average grade for tasks.

Bibliography

Basic:
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. Rydzykowski W., Wojewódzka-Król K. (red.), Transport, Wydawnictwo Naukowe PWN, Warszawa, 2006.

Additional:
1. Głowacka-Fertsch D., Fertsch M., Zarządzanie produkcją, WSL, Poznań, 2004.
2. Skowronek Cz., Syrjusz-Wolski Z., Logistyka w przedsiębiorstwie, PWE, Warszawa 1999.
3. Lubiński P., Projektowanie systemów transportu wewnętrznego, WPP 2013
4. Czasopisma branżowe.

Breakdown of average student's workload

	Hours	ECTS
Total workload	125	5,00
Classes requiring direct contact with the teacher	36	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	89	3,00