COURSE DESCRIPTION CARD - SYLLABUS

Course name
Warehouse management [S1Trans1>GM]

Course

Field of study
Transport

Year/Semester
3/6

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
30

Laboratory classes
15

Other (e.g. online)
0

Tutorials
15

Projects/seminars
0

Number of credit points

3,00

Coordinators

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Lecturers

Prerequisites

Knowledge: student has a basic knowledge of logistics, business process analysis, management and statistics Skills: student is able to accumulate information, interpret it, reasoning based on it, express and justify opinions, identify, associate and interpret phenomena occurring in a practice Social competence: student is aware of the importance and understands non-technical aspects and effects of warehouse processes, including those connected with inventory

Course objective

To give to students a basic knowledge of warehousing and inventory and to prepare them for warehouse and inventory management using quantitative and qualitative methods.

Course-related learning outcomes

Knowledge:
The student has an ordered, theoretically founded general knowledge of technology, transport systems and various means of transport.

Skills:

The student is able to obtain information from various sources, including literature and databases (both in Polish and in English), integrate it properly, interpret it and critically evaluate it, draw conclusions, and comprehensively justify his/her opinion.

Social competences:
The student understands that in technology, knowledge and skills very quickly become obsolete.
The student is aware of the importance of knowledge in solving engineering problems, knows examples and understands the causes of malfunctioning transport systems that have led to serious financial and social losses or to serious loss of health and even life.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:
Lectures: a recapitulation written exam (which may also include computational tasks and is optionally carried out on computers).
Laboratories: average of grades from at least 2 reports (spreadsheet files) presenting individual solutions to selected warehouse management problems (case studies/projects).
Classes (exercises): average of partial grades from a series of short quizzes/tests, possibly also homework.

Programme content

Introduction: basic definitions of warehouse, warehouse management and inventory management; position of warehouse and inventory management in an organizational structure of a company; typical duties of warehouse workers; different types of warehouses and their functionality.
Basic warehouse activities against warehouse processes: goods receiving into inventory / unloading, controls, storage, picking, unpicking, cargo units forming / preparation to transport, goods release / loading.
Typical problems / decisions on particular warehouse management levels: warehouse layout, an impact of an inventory level / a number of SKUs on a necessary number of pallet slots in a warehouse, everyday warehouse activities planning and controlling; basic quantitative and qualitative methods supporting typical warehouse management decisions.
Warehouse equipment: storage techniques and technologies.
Indexes in warehouse management: definitions and characteristics of main warehouse and inventory management indexes.
Inventory management: the essences of general inventory management strategies – pull and push; basic definitions of service level, safety stock, economic order quantity – EOQ, reorder point system – ROP and Fixed order interval system – FOI; ABC/XYZ classification methods and the other.
Demand forecasting: different forecasting methods and their application to inventory management.
Warehouse documentation: typical documents utilized in warehouse processes including warehouse receipt, delivery order, packing list, manifest (shipping list), picking list and the other; typical data types that warehouse documents compromise; methods of issuing warehouse documents including a role of WMSs and EDI technique.

Teaching methods

1. Lectures including multimedia presentation, movies
2. Laboratories – work with a spreadsheet
3. Tutorials/Exercises – quantitative and qualitative problems solving

Bibliography

Basic
1. Coyle J., Bardi E., Langley J.: Zarządzanie logistyczne. PWE, Warszawa, 2002 (in Polish)
2. Dudziński Z., Kizyn M.: Vademecum gospodarki magazynowej. Wydawnictwo ODDK, Gdańsk, 2002 (in Polish)
3. Fertsch M.: Podstawy zarządzania przepływem materiałów w przykładach. ILiM, Poznań, 2003 (in Polish)
4. Krzyżaniak St.: Podstawy zarządzania zapasami w przykładach. ILiM, Poznań, 2008 (in Polish)
5. Rutkowski K. (red.): Logistyka dystrybucji. Wydawnictwo Difin, Warszawa, 2002 (in Polish)
6. Sarjusz-Wolski Z.: Sterowanie zapasami w przedsiębiorstwie. PWE, Warszawa, 2000 (in Polish)

7. Kisperska-Moroń D., Krzyżaniak S. (red.).: Logistyka. ILiM, Poznań, 2009 (in Polish)
Additional
1. Cyplik P.: Zastosowanie Klasycznych Metod Zarządzania Zapasami do Optymalizacji Zapasów Magazynowych - Case Study. LogForum, vol. 1, zeszyt 3, nr 4, 2005 (in Polish)
2. Andrzejczyk P., Zając J.: Zapasy i Magazynowanie, przykłady i ćwiczenia. ILiM, Poznań, 2009 (in Polish)
3. Szymczak M. (red.): Decyzje logistyczne z Excelem. Difin, Warszawa, 2011 (in Polish)
4. Murphy P.R. jr, Wood D.F.: Nowoczesna Logistyka. Helion, Gliwice, 2011 (in Polish)

Breakdown of average student's workload

	Hours	ECTS
Total workload	85	3,00
Classes requiring direct contact with the teacher	60	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	25	1,00