STUDY MODULE DESCRIPTION FORM

Name of the module/subject			Code
Warehouse Management			**1010611361010600626**
Field of study	Profile of study (general academic, practical)		Year /Semester
Transport	**(brak)**		**3 / 6**
Elective path/specialty	Subject offered in:		Course (compulsory, elective)
Logistics of Transport	**Polish**		**obligatory**
Cycle of study:	Form of study (full-time,part-time)		
First-cycle studies	**full-time**		
No. of hours			No. of credits
Lecture: **2** Classes: **1** Laboratory: **1** Project/seminars: **-**			**2**
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 %)

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	student has a basic knowledge of logistics, business process analysis, management and statistics
2	**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
3	**Social competencies**	student is aware of the importance and understands non-technical aspects and effects of warehouse processes, including those connected with inventory

Assumptions and objectives of the course:

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

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

Knowledge:

1. Students know the notion of the warehouse and inventory management and differences between them. - [T1A_W03]
2. Students know particular types of warehouses and their functionality. - [T1A_W03]
3. Students know warehouse processes. - [T1A_W03]
4. Students know strategic, tactical and operational aspects of warehouse organization. - [T1A_W03]
5. Students know the essence and basic picking methods. - [T1A_W03]
6. Students know basic methods of inventory management. - [T1A_W03]
7. Students know warehouse and inventory management indexes. - [T1A_W03]

Skills:

1. Students are able to design a warehouse process. - [T1A_U01]
2. Students are able to select an appropriate storage technology. - [T1A_U01]
3. Students are able to select and apply an appropriate picking method. - [T1A_U01]
4. Students are able to analyze and asses inventory and develop an appropriate management method. - [T1A_U01]
5. Students are able to carry out index analysis of warehouse and inventories. - [T1A_U01]

Social competencies:

1. Students are aware of the significance of warehouse / inventory management and risks and responsibilities associated with them. - [K1_K02]
2. Students are aware of potential technical, economic and social effects that warehousing and storage may cause. - [K1_K02]
3. Students are able to develop independently their knowledge of warehousing. - [K1_K01]

Assessment methods of study outcomes

Lectures: a recapitulation written test.

Classes: unannounced short tests

Laboratories: tests and homework ? reports presenting proposed solutions of selected warehouse management problems (case studies).

Course description

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.

Basic bibliography:

1. Coyle J., Bardi E., Langley J.: Zarządzanie logistyczne. PWE, Warszawa, 2002
2. Dudziński Z., Kizyn M.: Vademecum gospodarki magazynowej. Wydawnictwo ODDK, Gdańsk, 2002
3. Fertsch M.: Podstawy zarządzania przepływem materiałów w przykładach. ILiM, Poznań, 2003
4. Krzyżaniak St.: Podstawy zarządzania zapasami w przykładach. ILiM, Poznań, 2008
5. Rutkowski K. (red.): Logistyka dystrybucji. Wydawnictwo Difin, Warszawa, 2002
6. Sarjusz-Wolski Z.: Sterowanie zapasami w przedsiębiorstwie. PWE, Warszawa, 2000
7. Kisperska-Moroń D., Krzyżaniak S. (red.).: Logistyka. ILiM, Poznań, 2009

Additional bibliography:

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

Result of average student's workload

Activity	Time (working hours)
1. Udział w zajęciach (wg planu)	60

Student's workload

Source of workload	hours	ECTS
Total workload	60	2
Contact hours	60	2
Practical activities	15	0