STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Modern concepts of inventory management in the supply chain	**1011102321011117940**

Field of study	Profile of study (general academic, practical)	Year /Semester
Logistics - Full-time studies - Second-cycle	**(brak)**	**1 / 2**
Elective path/specialty	**Subject offered in:**	**Course (compulsory, elective)**
Chain of Delivery Logistics	**Polish**	**elective**

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

No. of hours	No. of credits
Lecture: **30** Classes: **-** Laboratory: **-** Project/seminars: **30**	**5**

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 %)
technical sciences	**5 100%**
Technical sciences	**5 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	1. Student knows the basic logistical issues such as functional separation of logistics, the essence of customer service, the nature of transport and storage logistics. 2. Student knows the basic concepts of inventory management: EOQ, SL, ROP, the maximum level of inventories.
2	**Skills**	Student is able to calculate a simple task with the content. He can use statistical formulas such as the mean and statistical deviation.
3	**Social competencies**	Student can work in group

Assumptions and objectives of the course:

Main objective is to familiarize students with in-depth inventory management problems in terms of demand and the dependent and independent skills training in their operational decisions on renewal of stocks in the supply chain.

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

Knowledge:

1. The student has a deeper knowledge of inventory management - [K2A_W02;K2A_W03]
2. Student can identify and articulate the relationship between inventory, storage, transport and other functional areas of logistics, supply łańcuhca - [K2A_W08;K2A_W09]
3. Student recognizes inventory management techniques used in supply chains - [K2A_W12;K2A_W13]

Skills:

1. Students can design a process to analyze the efficiency of inventory management in supply chain - [K2A_U05;K2A_U09]
2. Student is able to define the reorder of stocks problem in a supply chain - [K2A_U04]
3. Student can use a spreadsheet with a simple algorithm to design a restoration of stocks in a single link of the supply chain - [K2A_U17;K2A_U19]

Social competencies:

1. Student is prepared to help and cooperate in the project group - [K2A_K03]
2. The student is responsible for the identification and resolution of the dilemmas associated with inventory management - [K2A_K03]
3. The student is determined to think in an entrepreneurial way of inventory management - [K2A_K03]

Assessment methods of study outcomes

Formative assessment:

a) For the project: on the basis of progress in the implementation stages of the project, and knowledge of the issues necessary to carry b) for the lecture: on the basis of answers to questions about the topics covered in previous lectures

Recapitulative assessment:

a) For the project: on the basis of (1) the quality of the project (2) answers to questions about the project b) for the lecture: on the basis of colloquium - written work on the issues discussed during the lecture. The exam can be applied after obtaining the ratings of the project and the laboratory. The exam is passed, after giving the correct answers to most questions

Course description

The issue of course includes the following topics: functions of inventory in supply chains, the impact of stocks on the basic objectives of supply chain planning methods in stocks in the supply chain, allocation of inventory in the supply chain policy-renewal of inventory in the supply chain, multi-stage inventory management systems, TOC Replenishment, VMI - CMI - SMI strategies, Stochastic Inventory Control. Managerial decision-making based on case studies.

Didactic methods:

Lecture: conversational lecture

Project: project method

Basic bibliography:

1. Cyplik P., Hadaś Ł., Zarządzanie zapasami w łańcuchu dostaw, Wydawnictwo Politechniki Poznańskiej, Poznań, 2012

2. Sherbrooke C.C Optimal inventory modeling of systems: multi-echelon techniques Kluwer Academic Publishers New York 2004

3. Tempelmeier H. Inventory management in supply networks: problems, models, solutions Books-on-Demand Norderstedt 2011

4. Cyplik P., AN APPLICATION OF SPARE SUPPLIES MANAGEMENT FOR WAREHOUSE SUPPLIES OPTIMIZATION USING CLASSICAL METHODS - CASE STUDY, Logforum 1.3 (2005): 4

Additional bibliography:

1. Krzyżaniak S. Podstawy zarządzania zapasami w przykładach ILiM Poznań 2008

2. Coyle J. J., Bardi E. I., Langley J.Jr. Zarządzanie logistyczne PWE Warszawa 2002

Result of average student's workload

Activity	Time (working hours)
1. Preparing for the Exam	20
2. Project	35
3. Lectures	30
4. Classes	30
5. Cosultations	10

Student's workload

Source of workload	hours	ECTS
Total workload	125	5
Contact hours	70	3
Practical activities	55	2