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systems - [[K1A_W20]]							
Skills:			connected with reliability and se	ecurity in maintaining technical eq	uipment, objects and technical		

1. The student can do the search that is based on disciplinary literature and other sources, and can in an orderly way, present information about the issue in the framework of logistics and its specific issues (inventory management, logistics, distribution logistics and supply, logistics, ecologistics) and supply chain management - [[K1A\_K01]]

2. The student is sensitive to non-technical aspects and effects of engineering activities, including its impact on the environment and connected with it, responsibility for decisions in respect of a part of the logistics and supply chain management - [[K1A\_K02]]

3. has self-study ability and comprehends it - [[K1A\_U05]]

4. can make use of analytic, simulation and experimental methods to formulate and solve engineering problems - [[K1A\_U09]]

5. can conduct a critical analysis of the ways in which technical solutions function and assess, by means of Security Engineering, the existing technical solutions, in particular machines, equipment, objects, systems, services and processes [[K1A\_U13]]

### Social competencies:

1. is aware of the relevance of the study and understands non-technical aspect as well as the consequences of engineering activity, including its impact on environment and taken responsibility of his decisions - [[K1A\_K02]]

2. Student is responsible for the identification and resolution of the dilemmas associated with inventory management -

[[K1A\_K05]]

## Assessment methods of study outcomes

Formative assessment:

current check of the acquired knowledge and skills learnt during lectures

Collective assessment:

a test based written exam within exam session

### **Course description**

The logistics system; mapping business processes (overview mapping methods - algorithms, IDEF) Flow Mapping; Procurement process - a procedure; Develop a plan of production based on the sales plan - a procedure, determination of the volume of deliveries by the chosen methods - a procedure, algorithms selected activities; Analyses the supply chain by using value stream mapping; Identifying improvement opportunities; Identifying value add and non value add activities

#### Basic bibliography:

1. Zarządzanie operacyjne, Waters D, PWN

- 2. Logistyka, Kisperska-Moroń, Krzyżaniak S., Biblioteka Logistyka, Poznań, 2009
- 3. Zarządzanie logistyczne, Bardi E.J., Coyle J.J., Langley C.J., PWE, Warszawa, 2002

# Additional bibliography:

# Result of average student's workload

Activity	Time (working hours)					
1. Lectures		15				
2. Participation in exercises	15					
3. Consultations	40					
4. Prepare for Training	20					
5. Preparing to pass exercises	5					
6. Assessment of lectures	3					
7. Discussion of the results of assessment of lectures		2				
Student's workload						
Source of workload	hours	ECTS				

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